UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

October 13, 2022

Bruce Thompson
de maximis, inc.

Re: Approval of de maximis inc. report titled *Holding Basin Containment Wall and Cap Pre-Design Investigations* (the "PDI Report") dated September 23, 2022

Nuclear Metals, Inc. Superfund Site

Dear Mr. Thompson:

EPA, in consultation with the Massachusetts Department of Environmental Protection, has completed its review of the *Holding Basin Containment Wall and Cap Pre-Design Investigations*, dated September 23, 2022. The PDI report was revised in response to EPA comments dated August 10, 2022. The PDI Report is subject to the terms and conditions specified in the Consent Decree (CD) for Remedial Design / Remedial Action (RD/RA) for the Nuclear Metals Inc. Site, which has an effective date of December 6, 2019.

EPA reviewed the revisions to the PDI Report and finds that they are acceptable. Therefore, EPA approves the PDI Report.

If there is any conflict between the Performance Standards as stated in the Work Plan and the Performance Standards as stated in the CD and statement of work (SOW), the CD and SOW shall control.

Please do not hesitate to contact me at nierenberg.kara@epa.gov or (617) 918-1435 should you have any questions.

Sincerely,

Kara Nierenberg
Remedial Project Manager

de maximis, inc.
200 Day Hill Road
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September 24, 2022

Mr. Christopher Smith
Remedial Project
Manager EPA Region 1
5 Post Office Square, Suite
100 Mail Code OSRR 07-4
Boston, MA 02109-3912

Subject: Nuclear Metals, Inc. Superfund Site-Concord, Massachusetts

Response to Comments on Holding Basin Containment Wall and Cap Pre-Design Investigations Report

Dear Mr. Smith:

The purpose of this letter is to provide our response to the comments received on August 10, 2022 on the Report titled *Holding Basin Containment Wall and Cap Pre-Design Investigations (PDI) Report* dated December 23, 2021. Each comment is included below, with a response following each comment accordingly.

General Comments

1. A description of the design process would help clarify how the PDI data will be used in the design phase. Specifically, describe how with the kinematic stability analysis and seepage analysis will inform the mix selection process and testing. As stated below a list identifying the major design criteria would be helpful. Established criteria values should be presented. If specific values are not yet established, then present the point in the design process when the criteria values will be established.

   Response: The design process and specific details of the design criteria are provided in Sections 2.2 and 5.1 of the text.

2. When noting that a specific number of borings/wells were completed (e.g., "Drilling of six (6) investigation borings"), please edit the bullet points to include the names of the borings/wells completed (or figure/table reference) for each investigation item to help the reader orient themselves to the work completed. For example, state "Drilling of six (6) investigation borings (locations HA20-

CMT-1 through HA20-CMT-6)."

Response: Comment noted, and changes were made throughout the document to clarify.

Specific Comments

3. **Section 2.3, Page 4, Table.** The Pre-design Investigation (PDI) Scope presented in the Table does not match the PDI Scope presented in the Remedial Design Work Plan – Appendix C (September 2020) (RDWP). Specifically, the RDWP for PDI HB-3 calls for bench scale testing of up to five containment wall mix designs and test on bentonite slurry, but the PDI only includes a literature survey of concrete mix performance. Please clarify this scope change in Section 2.3.

   Response: A scope change explanation has been added to Section 2.3. Feedback from the agencies on the hydraulic conductivity requirements summarized in Appendix E, PDI HB-5, is necessary before selecting mix designs for hydraulic conductivity testing. Each of the concrete mix designs summarized in Appendix C, PDI HB-3, is targeted for a hydraulic conductivity of approximately 1 x 10^{-8} to 1 x 10^{-6} centimeters per second (cm/s) or less.

4. **Section 3.1, Page 6.** The fourth (and last paragraph) of this section discusses the exclusion zone created surrounding the drill rig and has conflicting statements. The second sentence states the exclusion zone was accessed "only [by] the driller and driller's helper"; however, the following sentence states the field geologist and RSO personnel also accessed the exclusion zone. Please clarify the text.

   Response: Clarifying text has been added to Section 3.1.

5. **Section 3.5, Page 8.** In paragraph four, please update the text to include the analytical methods performed for each of the samples submitted for analysis to Alpha Analytical Labs.

   Response: Analytical methods used by Alpha Analytical and GEL Laboratories have been added to Section 3.5.

6. **Section 5, Page 10.** It is not clear how the specific PDI data will be used to form the design basis for the holding basin containment. A table listing specific design criteria (e.g., lithology, soil strength, permeability), and data sources (e.g., PDI boring, lab test, empirical relationship, literature values) that have been developed from the PDI and will be used in 30% Design calculations, modeling, and analysis would be helpful.

Response: The geotechnical, seismic, and hydrogeologic data and associated field explorations are summarized in Appendix A, HB-1. Explanations are provided within that appendix to describe how the data support specific design criteria. Additional detail on which data sources and design criteria are provided in each PDI report, Appendices A HB-1 through E HB-5, has been added to Section 5.1.

7. **Figure 1.** The legend on Figure 1 labeled the locations of test pits, soil borings, geophysical borings, observation wells, and historical observation wells as "approximate" (e.g. "designation and approximate location of soil boring"). Section 3.6.2 (Following Processing) stated that "all completed soil sampling locations were surveyed by a professional land surveyor". Please confirm whether samples shown on Figure 1 are the actual, surveyed locations and update the figure as needed.

   Response: Locations of soil borings, geophysical borings, observation wells, and historic wells were surveyed. Locations of test pits are approximate and based on the proposed locations shown in the plans. The Figure 1 Legend wording has been changed to remove the word "approximate," and a note was added for the test pits.

8. **Figures 2 through 6.** The material types shown within the boring legend (fill, ice contact deposits, glacial till, quartz diorite, granite) are very hard to read. Please add a separate section to the legend that includes larger examples of each material type.

   Response: A separate, larger legend item has been added to define the different geologic layers.

9. **Figures 3, 4, 6.** The proposed cut-off wall depth alternatives are not shown on these figures. Please revise each figure to show the proposed bottom of the cut-off wall to be consistent with Figures 2, 5, and 7.

   Response: Figures 2, 5, and 7 have been updated to show the cut-off wall depth alternatives.

10. **Figure 4.** The HA20-GP-104 boring shows a granite seam around elevation 72 feet; however, this is not noted on the field logs. Please review and revise as necessary.

    Response: The HA20-GP-104 boring log at elevation 72 ft has a description for "Bedrock cored is consistent with adjacent boring HA20-GP-105." The HA20-GP-105 boring log notes Acton Granite from 110.5 ft to 112.7 ft bgs, at elevation 72 ft. The granite seam shown in HA20-GP-104 is from the HA20-GP-105 log.

11. **Appendix A, Section 2.1, Page 2.** Please define "PQ".

    Response: PQ is a core barrel designation that is part of the Roschen™ Genuine Q wireline system. The P indicates the diameter of the core, and the Q indicates the wire line drilling. A short description was added to Section 2.1.

12. **Appendix A, Section 2.1, Page 2.** Exhibit HB1-1 includes a Standard Penetration Test (SPT) energy measurement calibration. Please summarize this activity in Section 2.1 and describe how the results were or will be utilized to correct the SPT N-values. If corrected N-value are to be used, please describe the process for selecting the correction factors.

    Response: A description of the SPT energy measurement calibration has been added to Section 1. Corrected N-values were not used in the evaluation of the relative densities and consistencies of the materials encountered.

13. **Appendix A, Section 2.5, Figure HB1-1, Page 6 and Section 4.4, Figure HB1-2, Page**
    The in-text figures are blurry and hard to read. Please remove the figures from the text and add them to the end of Appendix A in a Figures section. Also, it would be helpful to show the proposed alignment of the containment wall on this figure HB1-1.

    Response: The embedded Figures were removed from the main text and included at the end of the text section accordingly.

14. **Appendix A, Section 4.1.1, Page 7**. The HB-1 PDI scope calls for collection and analysis of 15 soil samples for grain size distribution from the borings along the containment (CMT 1-6). Were these analyses completed? Exhibit HB-1 provides 12 grain size analyses from boring B-101 through 104 but these appear to be related to PDI HB-4. Please clarify.

    Response: The HB-1 PDI work plan specifies that geotechnical laboratory testing will include up to 15 grain-size distribution tests of overburden soil samples. Due to the consistency observed in the soil conditions, only 12 grain-size distribution tests were conducted, and results are summarized in Exhibit HB1-4. An explanation was added to Section 4.1.1.

15. **Appendix A, Section 4.1.1, Page 7.** It is not clear how observed soil texture and Standard Penetration Test (SPT) results are used to identify the lithology contacts presented in Figures 2 – 7. Please provide a summary of the Standard Penetration test results (e.g., corrected N-value range and average) and observed Unified Soil Classification System (USCS) texture(s) for each of the overburden layer (i.e., fill, ice contact deposits, flow till and glacial till).

Given that location of the glacial till contact will be a key design criteria for the containment performance, please describe variation in texture and N-value range that generally differentiates the glacial till from the overlying ice deposits. Please describe the differences in the flow till and glacial till and how those differences may impact containment performance.

Response: Subsurface information from additional explorations, planned to be completed during the remedial design process, will be used to better differentiate between the glacial till, flow till, and the overlying ice deposits.

16. **Appendix A, Section 4.1.2, Page 7.** For completeness, please include a summary discussion of the Rock Quality Designation (RQD) results observed in the borings.

    Response: Text has been added to Section 4.1.2 summarizing the RQD observations.

17. **Appendix A, Section 4.2.1, Page 8.** Please define/label the difference between the two rows of "Bower-Rice" estimated hydraulic conductivities shown for each well.

    Response: A footnote to clarify the differences was added to the summary table.

18. **Appendix A, Section 4.2.2, Page 8.** Please define/label the difference between the two rows of "Hantush-Jacob" estimated hydraulic transmissivity and hydraulic conductivities shown for each well.

    Response: A footnote to clarify the differences was added to the summary table.

19. **Appendix A, Exhibit HB1-1**. The borehole logs state the coordinates, top of PVC casing were not surveyed; however, Section 3.6.2 of the report text states that "all completed soil sampling locations were surveyed by a professional land surveyor". Please clarify.

    Response: The coordinates, top of PVC, and top of casing were surveyed. Elevations were added to the borehole logs.

20. **Appendix A, Exhibit HB1-1.** The geologic material type shown on the Boring Log and Well Completion Reports in the stratigraphy column are inconsistent between boring logs. Please review and edit as needed.

    Response: The boring logs and CMT logs have been updated.

21. **Appendix B, Section 2.0, Page 1.** A kinematic analysis to determine seismically induced wall bending moments was not performed as part of this PDI as stated in the text. Section 5.1 states that this analysis will be completed at some point in the future. Please clarify.

Response: Subsurface information from additional explorations, planned to be completed during the remedial design process, will be used to develop the required wall depths and width during that phase. The kinematic analysis for the wall will be performed during the 95% design phase to evaluate the wall depths and width determined during the 30% RD.

22. **Appendix B, Section 5.1, Page 5.** Given that the wall mix design/composition, thickness, and depth will be strongly dependent on the kinematic analysis, please provide a description of the process and inputs required to complete the kinematic analysis. Will a finite element model (e.g., Plexus, Sigma/W) be used? Are there inputs (i.e., elastic modulus, tensile strength) that also need to be considered in the mix selection and mix study? Please address.

Response: A finite element model (Plaxis) will be used to evaluate the wall behavior under dynamic loading from the design earthquake. Soil and wall properties including moduli, strength, unit weight, and others will be developed based on site-specific explorations and laboratory testing. Containment wall backfill properties (including elastic modulus) used in the model will be based on compressive strength determined during bench-scale testing. Tensile strength of concrete will not be measured, as reinforcement will be required if the concrete backfill will be placed in tension due to bending during dynamic loading.

23. **Appendix B, Section 5.1, Page 5.** The text refers to backfill strength. Please clarify if backfill is anticipated during wall construction.

Response: Additional detail has been added to Section 5.1. For clarification, backfill for the wall will be the proposed mix identified to meet the design criteria. In all likelihood, it will be a mixture of Portland cement, bentonite, and other materials. The wall will be constructed under slurry with 100% replacement of the excavated material.

24. **Appendix C.** The pilot scale bench study for concrete mixes for the containment wall was not completed as planned in the PDI WP. The text states that no laboratory testing was done as part of this PDI. The information presented does not include clear references of where the proposed mix designs come from and how they are similar or different from anticipated conditions at the Holding Basin. Please explain why a bench scale laboratory test was not performed to test specific mixtures and provide additional information on the mix designs presented in Section 4 (Results) and Exhibit

HB3-1.

Response: An explanation has been added into Section 1. Agency review and confirmation of hydraulic conductivity requirements summarized in Appendix E, HB-5 Seepage Analysis, is necessary before selecting mix designs for hydraulic conductivity testing. Each of the example concrete mix designs summarized in Appendix C, HB-3, is targeted for a hydraulic conductivity of approximately 1 x 10^{-8} to 1 x 10^{-6} cm/s or less.

25. **Appendix C, Section 2.1, Page 1**. Please clarify if material flexibility and longevity were considered in the evaluation of mixture additives.

    Response: In Section 2.1, flexibility and longevity were stated as parameters considered in the evaluation of mixture alternatives. Plastic concrete was selected for its flexibility and ability to reduce brittleness in the Holding Basin wall. The ROD specifies that "the containment wall and cover will be constructed to be maintained for a minimum of 200 years." Longevity details have been added to Section 2.1.

26. **Appendix C, Section 2.1, Page 1**. It is unclear how many case studies were evaluated to identify potential mix proportions. Were mix designs from eight different sources considered as listed in the text? There only appear to be results for 7 mixes presented in Exhibit HB3-1.

    Response: Multiple mix designs were considered in the literature review process. Some mix designs did not present permeability and strength results or did not provide clear constituent proportion information; therefore, they were not included in Exhibit HB3-1. The seven mix designs presented in Exhibit HB3-1 were reviewed in greater detail based on how closely the site conditions corresponded with the Holding Basin wall conditions. The number of mix designs presented in Exhibit HB3-1 was corrected from eight to seven in Section 2.1. The strength and permeability results were also considered when narrowing down the mix designs. An explanation has been added to Section 4.1.

27. **Appendix C, Section 2.2, Page 2.** Please provide additional details. How will permeability be measured in subsequent testing? Is strength defined as compressive strength? Do criteria for tensile strength need to be considered? Do stress\strain relationships need to be developed for the kinematic analysis? Are there tests that would differentiate potential for shrinkage and tension cracking of the design mix?

    Response: Permeability of bench-scale samples will be measured in general conformance with ASTM D5084 (Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter).

Strength of the concrete will be defined as compressive strength. Tensile strength will not be measured, as reinforcement will be required if the concrete backfill will be placed in tension due to bending during dynamic loading. If necessary, standard reinforcement will be used, and the industry standard values will be used for the properties. Stress/strain behaviors will be developed in the compressive testing of the concrete (either by laboratory measurement of strain or use of empirical relationships based on compressive strength). Shrinkage will be evaluated with the ASTM C157 method. If necessary, reinforcement will be included to reduce the risk of tension cracks using standard design ACI methods.

28. **Appendix C, Section 2.2, Page 2.** Please provide the specific properties that differentiates “plastic concrete” from “conventional concrete”.

Response: A concise summary of plastic versus conventional concrete was provided at the beginning of Section 4.1 and additional details were added. Plastic concrete consists of aggregate, cement, water, and bentonite mixed at high water to cement ratios, whereas conventional concrete does not typically include a substantial percentage of bentonite. Plastic concrete is more ductile than conventional concrete and has a higher resistance to deformation. Plastic concrete was selected as a focus for research on the Holding Basin mix design as it is a mixture with the potential to reduce permeability as well as decrease cracking and brittleness.

29. **Appendix C, Section 4, Page 3.** Please describe the literature review process and why the search was narrowed to the mixes presented in Exhibit HB3-1.

Response: See response to Comment 26. Additional information on how the search was narrowed down to seven mix designs has been added to Section 4.1.

30. **Appendix C, Section 4.1, Page 3.** Please clarify the definition of “Cement Factor”. Is it the ratio of cement to bentonite or is it the weight of cement and bentonite divided by the volume of concrete? Are the percentages of cement (4% to 12%) and bentonite (0% to 6%) the weight of cement and bentonite to the weight of concrete (including water)? Please define “coarse” and “fine” aggregate.

Response: The cement factor is equivalent to the weight of cement plus the weight of bentonite per cubic yard of plastic concrete. The equation for the cement factor under Definition 1 in the Assumptions and Definitions section of Exhibit HB3-1 has been adjusted to clarify the definition. The percentages of cement and bentonite are by weight in dry form, and water has its own percentage by weight in the calculation package. According to the Portland

Cement Association, the fine aggregates generally consist of natural sand and crushed stone (Particle size passing through 3/8-inch sieve) and coarse aggregates are any particles greater than 0.19-inch. Coarse and fine aggregate differentiation differs between mix design studies. However, the *Plastic Concrete Cutoff Walls for Earthen Dams* study stated that masonry sand and ¾-inch well-rounded gravel were used as aggregates.

31. **Appendix C, Section 4, Page 3.** A summary and discussion of the results from the seven mixes (identified in the literature search) would be helpful. A discussion of how these projects relate or differ from the Holding Basin containment would also be helpful.

    Response: An embedded table has been added into Section 4.1 which provides a short discussion of the mix designs presented in the calculation package and comparison to the Holding Basin Containment site conditions. The order of mix designs in the Section 4.1 table corresponds to the table in Page 3 of the calculation package.

32. **Appendix C, Exhibit HB3-1, Pages 1.** Please define what the subscript numbers are that are included after some of the text in the first column (Wall Mix Design) of the table.

    Response: The subscript numbers on the wall mix designs correspond to the Reference number from the list in the Calculation Sheet. Reference 1, *Plastic Concrete Cutoff Walls for Earth Dams*, contained multiple mix designs. A note has been added beneath each table clarifying the subscript number meaning.

33. **Appendix C, Exhibit HB3-1, Page 1.** Is "Cement Factor" equal to pounds of cement divided by pounds of concrete or cubic yards of concrete? Does the numerator also include the pound of bentonite? The is a typographical error "Benton=ite". Please clarify what the "Bentonite Percentage (in Cement Factor)" equals? Does this mean that 40% of the dry reagents (i.e., cement and bentonite) are bentonite?

    Response: The cement factor is equivalent to the weight of cement plus the weight of bentonite per cubic yard of plastic concrete. The equation for the cement factor under Definition 1 in the Assumptions and Definitions section has been adjusted to clarify the definition. The typographical error has been fixed. The bentonite percentage is the percentage of cement factor, by weight, which is bentonite. An equation was added under the Assumptions and Definitions section for the bentonite percentage as it relates to the cement factor. The bentonite percentage indicates that the weight of bentonite comprises 40% of the total weight of cement and bentonite in the cement factor value.

34. **Appendix C, Exhibit HB3-1, Page 2 and 3**. The sheet title is "Groundwater

Velocity Calculation". Are the strength values for rows 1 and 2 unconfined compressive strength?

Response: The sheet titles have been corrected. The strength values located in Rows 1 and 2 of the table on Sheet 3 are shear strength values and that detail has been added to the table.

35. **Appendix C, Exhibit HB3-1, Page 3**. The word "concrete" is misspelled in the last row of the table.

    Response: The spelling has been corrected.

36. **Appendix D, Section 4.3.1, Page 6.** Photographs of the test pits should be included as an attachment/exhibit to this report.

    Response: Available test pit photographs and photographs of the Gabion Wall have been compiled as an attachment.

37. **Appendix D, Section 4, Pages 7 and 8.** Please provide supporting information used to develop the soil input perimeters (e.g., density, drained strength, undrained strength) that will be used in the Slide2 simulations. What were the specific N-values assigned to each layer? Were the N-values corrected and how were they averaged across the layer thickness? What specific empirical correlations were used to develop the perimeters from the N-values?

    Response: Additional detail added to Section 4.4.1. Given the variety of the N-values in each major stratum and the high efficiency of the hammer, strength parameters were assigned to layers with similar densities and consistencies in the major strata as observed during the field explorations. The parameters developed for the design are described in HB-4.

38. **Appendix D, Section 5, Pages 7 and 8**. Please describe how pseudo static slope stability analysis will be conducted using input as described in Appendix B. What minimum factor of safety will be used for the pseudo static simulation? Will this pseudo-static simulations be conducted for both the "long term" and "short term" conditions?

    Response: Sections 5.1 and 5.2 were updated to provide clarification of the analysis to be conducted.

39. **Appendix E.** The seepage analysis only includes calculation sheets. Given the importance of the seepage analysis to the wall design, please provide a narrative describing the analysis. Is the model presented a preliminary simulation with more detailed analysis to be conducted in the design-phase?

Please describe the software and required inputs and boundary conditions. Please describe how the aquifer properties were selected. How do the hydraulic conductivity values shown on the calculation sheet compare to results from Appendix A? How was the model calibrated? The calculation sheet shows simulated water levels and observed water levels (March 2021) on a single cross section, but a more comprehensive calibration is not provided. For completeness, please provide a description of the process for sensitivity\parametric analysis.

Response: The PDI narrative is included herein with the specific details on the model calibration and sensitivity analyses conducted. A summary table of the sensitivity/parametric analyses completed is attached to the calculation package and is referenced in the PDI narrative.

40. **Appendix E, Section 5, Page 5.** The first paragraph of this section suggests that the design will only consider 2 design scenarios (shallow wall that is keyed 10 ft into till or deep wall that is keyed 5 ft into bedrock). Please clarify and edit text as necessary.

    Response: The text and figures were updated and clarified as necessary.

41. **Appendix F.** This appendix is missing. Please provide the laboratory reports in the final version of the report.

    Response: Laboratory reports have been compiled for Appendix F and they will be provided in the final version.

Please contact me if you have any questions,

Sincerely,

Bruce Thompson
Project Coordinator

Enclosure

cc: Garry Waldeck, MassDEP
Settling Defendants

www.haleyaldrich.com

REPORT ON

HOLDING BASIN CONTAINMENT WALL AND CAP PRE-DESIGN INVESTIGATIONS
NUCLEAR METALS SUPERFUND SITE
CONCORD, MASSACHUSETTS

by
Haley & Aldrich, Inc.
Boston, Massachusetts

for
de maximis, inc.
Windsor, Connecticut

File No. 131884-003
September 2022

HALEY & ALDRICH, INC.
465 Medford St.
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23 September 2022
File No. 131884-003

de maximis, inc.
200 Day Hill Road
Suite 200
Windsor, Connecticut 06095

Attention: Bruce Thompson

Subject: Nuclear Metals, Inc. (NMI)
Draft Holding Basin Containment Wall and Cap Pre-Design Investigation Evaluation Reports
Concord, Massachusetts

Ladies and Gentlemen:

The purpose of this letter is to transmit our initial draft of the Holding Basin (HB) Pre-Design Investigation (PDI) Evaluation Reports. The planned scope of work for these PDIs involved conducting test borings, groundwater sampling, and hydraulic testing of the subsurface soils and bedrock to better define the geotechnical engineering properties of the subsurface soils and bedrock within and around the Holding Basin. The Remedial Investigation was sufficient in its completeness to delineate the subsurface conditions along the proposed containment wall alignment and to define the soil properties within the footprint of the HB to design the containment wall and cap system anticipated to meet the Record of Decision (ROD) requirements for the remedy. As required by Section 3.3(a) of the Statement of Work (SOW), PDI Work Plans (Work Plans) were prepared and submitted to United States Environmental Protection Agency (EPA) in March 2020 to obtain the information (i.e., address data gaps) needed to complete the remedial design by conducting additional field investigations. EPA approved the PDI work plans in October 2020. PDI field activities were implemented between October 2020 and October 2021.

In accordance with Section 3.3(b) of the SOW, PDI Evaluation Reports have been prepared for the three remedial components (Site-wide Soils and Sediments, in-situ stabilization [ISS], and HB Containment). This report provides the five PDI evaluation summaries (HB-1 through HB-5) for the Holding Basin Containment Wall and Cap.

Please feel free to contact us should you have any questions or if you need additional information.

Sincerely yours,
HALEY & ALDRICH, INC.

Mark D. Kelley, P.E. (MA)	Timothy Crowl, P.E. (MA)
Senior Hydrogeologist	Associate

Enclosures

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1. Introduction

On 17 October 2019, the United States Environmental Protection Agency (EPA) lodged a Consent Decree (CD) with the United States District Court for the District of Massachusetts Eastern Division in connection with Civil Action No. 1:19-cv-12097-RGS. The CD was entered by the Court on 6 December 2019. The CD and the Statement of Work (SOW) provided as Appendix B to the CD describe the Remedial Design/Remedial Action (RD/RA) activities to be performed for the Nuclear Metals, Inc. (NMI) Superfund Site (Site) in Concord, Massachusetts. The RD/RA activities are to be undertaken by the Settling Defendants (SDs) to the CD, with funding contributions from the Settling Federal Agencies (SFAs).

To efficiently implement the remedy, the work will be divided five RA projects. RA Projects 1) through 4) below are outlined in Section 1.4 of the SOW. The need for RA Project 5) was identified during the Groundwater Non-Time-Critical Removal Action (NTCRA). The five RA projects are:

1) excavation and off-site disposal of contaminated sediments, underground drain lines and debris, and non-Holding Basin (HB) soil, or “Site-wide Soils and Sediments” (SSS);
2) in-Situ Stabilization (ISS) of depleted uranium (DU) in HB soil and of DU and natural uranium in overburden and bedrock groundwater or “ISS;”
3) containment of HB-stabilized soil with a low-permeability vertical wall and horizontal sub-grade cover or “HB Containment;”
4) hydraulic containment and ex-situ treatment of volatile organic compounds (VOCs) and 1,4-dioxane in overburden groundwater; and
5) hydraulic containment and ex-situ treatment of volatile organic compounds (VOCs) and 1,4-dioxane in bedrock groundwater.

The Remedial Investigation (RI) was sufficient in its completeness to delineate the nature and extent of contamination such that risks to human health and the environment could be quantified and remedial decisions could be made. However, the RI was not intended to provide all of the information necessary to design a remediation. Therefore, as required by Section 3.3(a) of the SOW, Pre-Design Investigation (PDI) Work Plans (Work Plans) were prepared and submitted to EPA in March 2020 to obtain the information (i.e., address data gaps) needed to complete the remedial design by conducting additional field investigations. EPA approved the Work Plans in October 2020. PDI field activities were implemented between October 2020 and October 2021.

In accordance with Section 3.3(b) of the SOW, PDI Evaluation Reports have been prepared for the three remedial components (Site-wide Soils and Sediments, ISS, and HB Containment). This report provides the five PDI evaluation summaries (HB-1 through HB-5) for the Holding Basin.

1.1 PERFORMANCE STANDARDS

The Record of Decision (ROD) provided Remedial Action Objectives (RAOs), which are medium-specific goals that define the objective of remedial actions to protect human health and the environment. RAOs specify the chemicals of concern (COCs), potential exposure routes and receptors, and provide a general description of what the cleanup will accomplish. The RAO that is relevant for the majority of the HB remedial design and related PDI work is:

Prevent migration of DU/uranium from soils in the Holding Basin that would result in groundwater concentrations exceeding ARARs [Applicable and Relevant Requirements];

An additional RAO is also relevant to the stability analyses conducted as part of HB-4 that will be used for the Sphagnum Bog and Cooling Pond remedial actions:

Protect ecological receptors from exposure to contaminants (PCBs, copper, mercury, and lead) in sediments indicative of adverse effects at the Sphagnum Bog while maintaining the physical and ecological integrity of the bog.

The ROD specifies that the remedy must include containment of the stabilized soils with a low-permeability vertical wall and horizontal cover to isolate the stabilized soil and limit mobility of contaminants through groundwater. In addition to meeting the groundwater ARARs as noted in the RAO, the remedy must also meet the Nuclear Regulatory Commission regulation 10 Code of Federal Regulations (CFR) Part 40, Appendix A, Criterion 6(1), which is considered an applicable ARAR. As described in the Remedial Design Work Plan (RDWP), the relevant aspect of this ARAR is that the containment wall and cover will be constructed to be maintained for 1,000 years to the extent reasonably achievable and in any case for a minimum of 200 years. This means the containment wall will also need to be designed to withstand a design earthquake.

The activities conducted as part of PDI HB-1 through PDI HB-5 were intended to provide data to support a design that will meet the standards described in the ARARs.

1.2 DOCUMENT ORGANIZATION

The HB PDI Evaluation Report includes:

- a summary of the PDI scope and objectives (Section 2)
- a summary of the PDI implementation activities (Section 3)
- documentation of data management and validation (Section 4), and
- next steps in the remedial design process.

Appendices A through E provide documentation of the PDI activities for HB-1 through HB-5, respectively.

2. PDI Objectives

This Holding Basin (HB) Pre-Design Investigations (PDI) Summary Document provides a brief review of the various site areas, objectives and scopes of the work associated with the completed HB PDI investigations. This document also provides a summary of implementation procedures conducted during PDI activities, which were performed consistently over multiple HB activities. Haley & Aldrich, Inc. (Haley & Aldrich) completed the work in accordance with the RDWP and all appendices, including the Work Plans, the Field Sampling Plan (FSP), and the Quality Assurance Project Plan (QAPP).

More detailed descriptions of individual HB PDI activities completed, included location identifications and associated investigation results, and remedy design considerations are provided in the attached HB appendices.

2.1 HB-1 HOLDING BASIN GEOTECHNICAL INVESTIGATIONS – SOIL AND BEDROCK

The objective of PDI HB-1 was to collect geotechnical and hydrogeologic data at the HB to support the design of the containment wall. Details of the investigations and results for this PDI are included in Appendix A.

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin	Collect geotechnical, seismic, and hydrogeologic data necessary to design a containment wall that prevents depleted uranium (DU) from migrating downgradient and meets the applicable or relevant and appropriate requirements (ARARs).	• Boring installation along the alignment of the cutoff wall into bedrock to evaluate soil density and bedrock characteristics by conducting standard penetration tests (SPTs) throughout the overburden of each of these borings, and coring bedrock for laboratory testing to aid in the design of the containment wall and construction methods. • Borehole geophysics to evaluate water bearing zones and bedrock fracture orientation. • Installation of continuous multi-level tubes (CMTs) to gain multi-level piezometric head and groundwater quality information to support hydraulic design of the containment wall and evaluating ARARs. • Observation wells (OWs) installation within bedrock boreholes located adjacent to the deep CMTs to allow for slug testing and short duration pumping to observe response in CMTs and other OWs. • Geotechnical Laboratory testing: grain size tests on overburden soils, compression strength tests on rock core, and Cerchar Abrasivity tests on rock core. • Conduct research on pump house foundation and utility alignments into pump house and conduct test pits to confirm utilities and structures (i.e., pump house slabs) that may need to be removed to enable wall construction or other adjacent remedial actions.

2.2 HB-2 SEISMIC ANALYSIS FOR CONTAINMENT WALL

The objective of this PDI was to collect information on seismic conditions to support the design requirements of 10 CFR Part 100 as well as 10 CFR Part 40. Based on 10 CFR Part 100, the closure remedy will be designed to withstand the Safe Shutdown Earthquake (SSE), including an assessment of the potential for surface deformation and faulting, liquefaction potential, and stability of the adjacent slope extending downward to the bog. This analysis will be conducted as part of the 30% RD and presented with the proposed containment wall design and cap design.

Details of the investigations and results for this PDI are included in Appendix B.

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin	Conduct Seismic Evaluation for Holding Basin Wall Design	• Drill six bedrock boreholes for cross-hole geophysics, forming two sets of 3-hole arrays for the geophysics. • Field shear wave measurements using cross-hole geophysical methods to characterize soil and bedrock to support the probabilistic seismic analysis to meet seismic design applicable or relevant and appropriate requirements (ARARs). • Conduct seismic analysis, determine design loads for containment wall in accordance with ASCE-7 design standards, and perform structural design of wall to resist design earthquake.

2.3 HB-3 BENCH SCALE TESTING OF SLURRY AND CONTAINMENT WALL MIX DESIGNS

The objective of this PDI was to evaluate potential containment wall mix designs.

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin	Identify mix design information in support of a performance-based specification for the barrier wall construction. Assist contractors with selection of materials and mix designs as they prepare bids for barrier wall construction.	• Identify potential type and percentage of bentonite to be used in slurry for temporary support of excavated panels for containment wall • Evaluate potential concrete backfill mix designs to satisfy minimum required permeability and strength criteria • Evaluate mix design materials and their potential interactions with radiologically impacted media

Hydraulic conductivity is a critical aspect of the containment wall design, and information is needed on the ranges of hydraulic conductivities achievable using slurry wall construction methods with different mix designs. The mix designs will also be used to verify that the design will meet the required changes to depleted uranium migration in groundwater over the time frame stipulated in 10 CFR Part 40.

Agency review and concurrence on proposed hydraulic conductivity requirements summarized in Appendix E, HB-5 Seepage Analysis, is necessary before finalizing mix design selections and completing hydraulic conductivity testing. As such, a literature review of types of mixes and range of hydraulic conductivity achieved is included within this report but laboratory testing on the proposed mix designs has not yet been conducted.

Details of the literature review and recommendations for the mix designs to be tested for completion of this PDI are included in Appendix C, HB-3 - Slurry Wall Mix Designs for Bench Scale Testing .

2.4 HB-4 COVER DESIGN AND SLOPE STABILITY ANALYSIS

The purpose of this PDI was to investigate the geotechnical properties of sloped areas of the site under existing conditions and future conditions with conceptual level future grading of the HB and Landfill areas. Existing slopes in some areas of the site pose risk for slope failure or limit access for equipment during investigatory activities and future remedial activities, including around the HB, the Cooling Pond (including the gabion wall at the northern end), and the Sphagnum Bog. Maintaining stable slopes with adequate safety factors is critical for executing the selected remedial actions outlined in the ROD.

Details of the investigations and results for this PDI are included in Appendix D.

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin Cover and Side Slopes of Cooling Pond and Sphagnum Bog Areas	Cover Design and Slope Stability Analysis	• Complete up to four borings into Holding Basin to collect geotechnical data necessary for cover system design. • Complete hand probes to determine organics thickness within Sphagnum Bog, and soft sediment thickness of sediments in Cooling Pond. • Complete hand probes along slopes adjacent to the Holding Basin and Cooling Pond to evaluate near surface soil conditions. • Collect field vane shear measurements on organics located within the bog. • Complete two test pits behind the gabion wall south of the Cooling Pond to evaluate the wall cross-section. • Conduct plumbness survey of the gabion wall face at up to two transects. • Conduct slope stability analysis for proposed finished grades of Holding Basin Cap and adjacent side slopes, and side slopes adjacent to bog and Cooling Pond.

2.5 HB-5 SEEPAGE ANALYSIS

The purpose of this PDI was to evaluate the various alternative containment wall design depths and the resulting seepage potential within the overburden and bedrock aquifers. The analysis and results from this PDI will be used to inform the design of the hydraulic and physical properties of the proposed containment wall. The analysis presented in this PDI includes evaluating the containment wall keyed into glacial till or bedrock. The analysis includes several variations to the wall depth and thickness to determine the appropriate range of design parameters for the wall to meet the design criteria.

Details of the investigations and results for this PDI are included in Appendix E.

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin	Complete seepage analysis to evaluate hydraulic properties of wall and determine depth of wall.	• Setup SEEP/w model with overburden and bedrock aquifer geometry using hydraulic conductivity values from Geosyntec calibrated groundwater flow model as well as data gathered in PDI HB-1. • Conduct parametric seepage modelling on proposed wall depths and wall hydraulic conductivity to refine design parameters of containment wall.

3. Implementation Summary

3.1 ACCESS

PDI work was conducted within several site areas, and across varying field conditions, some of which were challenging to access. Conditions at sampling locations included the following: wooded uplands, steeply sloped wooded areas, at the bottom of steep slopes, areas adjacent to wetland, in wet areas along wetland fringes, within wetlands with soft sediment present, and near areas of standing water.

Prior to sampling, each proposed sampling location was located either using a hand-held GPS unit or by Feldman Surveyors, the project survey team, and each location was reviewed for access and general field condition considerations. Pre-decontaminated ("clean") or new sampling equipment, supplies, glassware, etc. was mobilized to each sampling location, either carried by hand or transported using a wagon sled or using a field vehicle depending on accessibility. Routes to proposed sampling locations were reviewed to follow general project guidelines related to different zones to be established at the site (e.g., Contaminated Soil Zone, Contaminant Reduction Zone, etc.). Actual routes and paths through wooded areas were determined to most safely access each sampling location, with least disturbance to the surrounding area. Very limited clearing such as clearing of branches, brush, leaves, etc. was necessary to access some the locations and to create individual sampling areas. Disturbance to surficial soils was limited.

If applicable, all equipment and tools which entered the restricted area was subject to screening by a health physicist (HP) according to the Radiological Surveys Health Physics Procedure (HPP; HP-NMI-05 in the Field Sampling Plan [FSP], RDWP Appendix I) to determine if background levels of radiation exist on the equipment prior to exposure to on-site soils. To Haley & Aldrich's knowledge, background levels of radiation were not detected on equipment prior to exposure to Site soils. Additionally, disposable barriers were applied as directed by the on-site HP or Radiation Safety Officer (RSO) to prevent contaminating equipment and tools while in the restricted area. One example of this was where the HB PDI work for borings conducted within the HB. Access down the steep slope was difficult and required a temporary handrail that was at the top of the HB. The top post of the handrail functioned as the exclusion zone marking prior to enter or exiting the HB.

Before entering the restricted area, workers reviewed and signed the specific radiation work permits for drilling and soil sampling activities, donned the required personal protective equipment (PPE) and monitoring equipment as specified in the radiation work permit and/or instructed by the RSO or HP. Prior to initiating work, the staff consulted with the HP and RSO to determine an approach for screening and transporting equipment to the decontamination area and back so that work can progress efficiently.

For locations where a drill rig was utilized, the driller created an exclusion zone around the drill rig, typically consisting of cones and roped off. Only the driller,driller's helper, Haley & Aldrich field geologist, and RSO Personnel entered the exclusion zone. The borings completed along the alignment of the containment wall were in non-wooded areas and required an exclusion zone consisting of a Table for only the field geologist and RSO personnel as well as the driller and helper to provide collected samples of soil or rock core.

3.2 SOIL SAMPLING AND BEDROCK CORE DRILLING

As part of the PDI work the multiple borings were completed through overburden and bedrock. Borings were completed in accordance with the following ASTMs:

- ASTM D1586 for SPT of the soils;
- ASTM D2488 for the visual description methods for describing the soils;
- ASTM D2113 for rock coring methods; and
- ASTM D6032 for rock quality designation (RQD) measurement methods.

Geotechnical laboratory testing included 15 grain size tests of overburden soil samples, 15 compression strength tests on rock cores, and 8 Cerchar abrasivity tests on rock cores. Testing was performed in accordance with the following ASTM International Standards:

- ASTM D6913/D6913M-17: Standard Test Methods for Particle Size Distribution (Gradation) of Soils Using Sieve Analysis
- ASTM D7928-17 Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis
- ASTM D7012-14e1: Standard Test Methods for Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperatures
- ASTM D7625-10: Standard Test Method for Laboratory Determination of Abrasiveness of Rock using the CERCHAR Method.

3.3 CROSSHOLE SEISMIC BORING INSTALLATION

The procedures of ASTM D4428 require cased boreholes, and the casing is specified to be either PVC or aluminum. The boreholes were completed by installing 3-inch (in.) ID PVC Schedule 40 casing, in each of the boreholes of each crosshole array. The cross-hole borehole locations are shown on Figure 1 and are spaced 12 to 15 feet (ft) apart. Prior to conducting the cross-hole testing, a deviation survey was completed by Geophysical Applications, Inc.

The completed boreholes were drilled by Cascade Drilling, and met the following requirements:

- The cased boreholes were confirmed to be sufficiently straight to allow free passage of a cylinder 2.5 in. in diameter by 52 in. long. (This requirement ensures that the downhole source passes freely through the casing.)
- The casings were capped and grouted for the full depth of the boreholes in accordance with ASTM D4428. Rigid grout was utilized within bedrock, and non-rigid grout was used within the overburden section of the boreholes.
- Prior to the testing, the boreholes were filled with potable water.

3.4 SHALLOW SOIL SAMPLING

For surficial soil (0 to 1 ft), sampling was completed using a hand auger or other hand-held excavation device such as a shovel or hand trowel. Samples were collected by advancing an approximate 4-in. diameter stainless steel hand auger to a 1 ft depth, or by manually hand excavating explorations using a shovel and/or hand trowel to a minimum dimension of approximately 6 in. wide by 6 in. long to 1 ft depth. Soil samples were collected from the hand auger or from the side walls of the explorations, compositing the entire 1-ft depth interval in a disposable aluminum pan. The volume of collected material was stirred to homogenize the sample and then placed in appropriate glassware for submission to the laboratory.

The general drilling soil logging and sampling activities were conducted in accordance with SOP NMI-S-004 – Drilling and NMI-S-006 – Soil Description. Additional procedures related to radiological screening of the soil cores and coordination with the HP and RSO have been outlined above.

Upon completion, explorations in softscape areas were backfilled with soil cuttings and explorations in pavement areas were backfilled with crushed stone and the ground surface was restored or graded to approximate existing surrounding conditions. Excess soil cuttings not used for analytical soil samples or backfill were containerized and transported to the storage drum containment area. The borings conducted within the HB were grouted flush with ground surface, and the liner was patched.

3.5 GROUNDWATER SAMPLE COLLECTION

Groundwater sampling conducted as part of the HB PDI work was performed using low-flow methodology as outlined in the EPA Low-Stress (Low-Flow) Standard Operating Procedure EQASOP-GW4. A copy of the NMI-GW-010 is included in the FSP.

Field instruments were inspected and calibrated at the beginning of each day and checked during field activities to verify performance. Instrument specific calibration procedures were performed in accordance with the instrument manufacturer’s requirements.

During low flow purging, a multi-parameter meter was used to measure pH, specific conductivity, turbidity, dissolved oxygen, oxidation reduction potential (ORP) and temperature. Readings were collected at 5-minute intervals and recorded on field logs. Once the parameters were stable, the samples were collected into laboratory provided glassware.

Samples were submitted to Alpha Analytical Labs in Westborough, Massachusetts (a National Environmental Laboratory Accreditation Program [NELAP] accredited laboratory) and GEL Laboratories in Charleston, South Carolina. VOCs, semi-volatile organic compounds (SVOCs), and nitrate/nitrite were analyzed by Alpha Analytical Labs. VOCs were analyzed by EPA method 8260C, SVOCs were analyzed by EPA Method 8270D, and nitrate and nitrite were analyzed by EPA Method 353.2. Metals were analyzed by GEL Laboratories using EPA Method SW 846 3005A/6020B. The chemicals of concern analyzed are outlined in Table L-1 of the ROD and listed below.

- 1,1-Dichloroethane
- Tetrachloroethene
- Trichloroethene
- Vinyl chloride
- 1,4-Dioxane
- bis(2-Ethylexyl)phthalate
- Arsenic
- Barium
- Chromium
- Cobalt

- Copper
- Iron
- Manganese
- Molybdenum
- Thorium
- Depleted Uranium
- Natural Uranium
- Nitrate
- Nitrite

Additional samples were submitted for quality control, as summarized in QAPP (Appendix J of the RDWP). Quality control samples were analyzed for all parameters analyzed during sampling events.

3.6 FIELD SAMPLE PROCESSING

3.6.1 Prior to and During Processing

At each land-based soil or bedrock sample location, polyethylene sheeting was placed to create a small, dedicated area to temporarily stage sampling equipment and supplies, and to process the samples. For sediment samples collected in wet areas (within or adjacent to wetlands, or in pond), sediment was collected at the sample locations, then transported to a safe location at a dry, stable area for sample processing.

Small sample processing areas were also constructed at either each drilling/sampling location to process soil samples collected by the drilling rigs, or at centralized locations used to facilitate drilling/sampling at several locations.

For activities where a drill rig was used, after work areas and processes were established, drilling commenced with continuous sampling. Soil cores were extracted and carried to the logging area by the driller or the driller's helper. The borings were advanced, and the soil cores were extracted until the final depth of the boring was reached. If the driller proceeded faster than the field engineer or geologist could process samples, the soil cores were staged in liners at the logging area. After a soil core had been set in the logging area, the core liner was cut open and logged by the field engineer or geologist using the Unified Soil Classification System (USCS) and following the soil description SOP (NMI-S-006, in the FSP).

Refer to the applicable project specific FSP (Appendix I of the RDWP, de maximis, September 2020), the Standard Operating Procedures (SOPs) located as Appendix I 1 of the FSP, QAPP (Appendix G of the Remedial Design Work Plan, de maximis, September 2020) for further details related to protocols for sample processing, glassware, preservation, chains of custody, decontamination, and field documentation requirements and procedures for sample collection activities. Sampling was conducted in general accordance with the FSP, SOPs and QAPP, discussed above.

3.6.2 Following Processing

After sample processing was completed, the dedicated sampling equipment was bagged for disposal and the remaining equipment was decontaminated prior to reuse. Refer to the Investigative Derived Waste

(IDW) Handling and Storage (SOP NMI-005) and Field and Heavy Equipment Decontamination Procedures (SOP NMI-007) SOPs for additional details related to those items.

Following completion of the sampling, the completed as-sampled locations were marked with a flag or wood stake with flagging attached. Subsequently, all completed soil sampling locations were surveyed by a professional land surveyor. Note that sediment samples were collected immediately adjacent to corresponding piezometer locations, therefore locations were not marked nor surveyed separately.

If applicable, each time staff and/or equipment left a restricted area, it was screened out of the restricted area under the guidance of the HP following the Personnel Monitoring and Decontamination HPP (HP-NMI-06, in the FSP) and signed out of the specific radiation work permit. All waste and PPE generated during the field event was bagged appropriately, handled and dispose of directed by the RSO and described in the IDW handling and storage SOP (NMI-5 in the FSP) and Radioactive Waste HPPs HP-NMI-19 and HP-NMI-27 in the FSP.

3.7 FIELD SAMPLE SCREENING

Prior to further handling, soils were initially screened with a handheld radiation survey instrument to ensure radiation levels are at a level where the core is safe to handle as determined by the HP and approved by the on-site RSO. Once the soil was deemed safe by the HP or RSO to handle without further controls, the soils were logged by the field engineer or geologist and following the soil description SOP (NMI-S-006, in the FSP). After logging, the soil core was screened again using the handheld radiation survey instrument by the HP, and the count rate per minute was logged.

At the end of the sampling day, all soil samples collected were screened by the onsite Radiological Laboratory to determine the concentration and total radioactivity prior to shipment. Gamma spectroscopy was be used to identify the isotope and assign activity present in each sample. The samples were grouped to comply with Department of Transportation (DOT) and International Air Transport Association (IATA) guidelines. The screening data was also provided to the receiving laboratory for approval prior to shipment.

3.8 IDW MANAGEMENT

IDW generated during the surficial, subsurface and supplemental delineation sampling included soil cuttings from subsurface explorations. IDW management and waste stream documentation was handled through *de maximis.* Excess soil was placed back within the hand exploration and/or borehole completed to the extent possible. Excess soil cuttings were drummed for future disposal in accordance with the Transportation and Off-Site Disposal Plan dated 21 October 2021. Excess groundwater was containerized, treated on-site, and discharged to the Cooling Pond.

4. Data Validation

Data validation was conducted in conformance with the QAPP (Worksheet #34 to #37) to assess the data usability such that deficiencies in the data and potential impacts to the results were identified. Data validation was performed by ddms, Inc. following receipt of the laboratory data reports from GEL Laboratories, LLC. Laboratory reports are provided as Appendix F. Appropriate qualifiers codes, as defined in the EPA National Functional Guidelines, were amended to the data points in the database. The data validation reports are available on the Project Portal and the original laboratory data reports have been archived.

5. Next Steps

5.1 DESIGN COMPONENTS

Data generated during the HB PDI will be used as the basis for the 30% Remedial Design (RD) of the Containment Wall and cap system for the Holding Basin. The data presented herein is intended to supplement the Conceptual Site Model of the site and to provide a refined understanding of the soil and bedrock conditions along the alignment of the HB containment wall. Geotechnical, seismic, and hydrogeologic data and associated field explorations are summarized in Appendix A, HB-1. On-going analysis as part of the 30% RD includes a summary of ground motion parameters of the bedrock and shear wave measurements from the cross-hole geophysics that will be used to complete a kinematic analysis of the proposed containment wall (Appendix B, HB-2), additional stability analyses (Appendix D, HB-4), and additional seepage model runs to support the design (Appendix E, HB-5). Figure 1 shows the completed explorations around the HB. Figures 2 through 7 show geologic sections through the HB in the orientation shown on Figure 1.

While the PDI Evaluations further defined the subsurface conditions, it is anticipated that some additional test borings along the wall alignment as part of the design process will be conducted to define the toe elevation of the containment wall. Based on the seepage analysis located in Appendix E, HB-5, the wall can be embedded 5 ft into the glacial till, 10 ft into glacial till or to top of bedrock, or 5 ft into bedrock in order to achieve adequate cut-off; however, the glacial till is less than 10 ft thick on the northeast side of the HB. In this area, the wall is expected to extend into the top of the rock. The limits of wall embedment into bedrock will be important to define between the 30% RD and the 90% RD.

As outlined in the specific PDI Summary Appendices (Appendices A through E) the data collected as part of the Holding Basin PDI work is compiled herein to facilitate the completion of the 30% RD. Because of the complexity of the Site and the necessary coordination with the scheduled ISS work, the sequence of construction of the HB containment wall will be determined based on the ISS schedule. Grading of the HB will be required, and that preliminary grading plan will be part of the site wide soil design, as that portion of site construction is expected to begin before the implementation of the ISS remedy is completed within the HB limits. For example, soil removal from the center of the plume will enable injections related to ISS to be conducted more easily. In addition, regrading of the holding basin as part of the soil removal remedy will enable access to steeper side slopes of the holding basin by the ISS injection equipment. The design drawings for the Site-wide soils and sediment, coupled with the ISS and containment wall and cap are expected to include the following drawing sets to allow for separate phases of construction to complete the entire remedy:

- AOI 8 and 9
- Courtyard Area and Building D (Plume Core)
- Building E and Regrading of Holding Basin
- Landfill and Wetlands
- ISS in Holding Basin and Plume Core Areas (Design by Geosyntec)
- Containment Wall and Cap
- Cooling Water Pond and Gabion Wall Stabilization
- Building A and D, and North Lot Restoration

5.2 DESIGN SCHEDULE

The initial grading of the Holding Basin will be included in a design drawing set for the excavation of the footprint of Building E. This part of the remedy will include segregating soils from Building E for off-site disposal and for on-site reuse to establish the grades required for the construction of the HB Containment Wall. This will allow an early action construction activity to enable ISS to be conducted within the HB.

FIGURES

LEGEND

- DESIGNATION AND APPROXIMATE LOCATION OF TEST PIT
- DESIGNATION AND LOCATION OF SOIL BORING [CMT - CONTINUOUS MULTICHANNEL TUBING (3)]
- DESIGNATION AND LOCATION OF GEOPHYSICAL BORING
- DESIGNATION AND LOCATION OF OBSERVATION WELL
- DESIGNATION AND LOCATION OF HISTORICAL OBSERVATION WELL
- ORIENTATION AND LOCATION OF HOLDING BASIN CROSS SECTION
- EXISTING CONTOUR MAJOR (5')
- EXISTING CONTOUR MINOR (1')

NOTES

1. BASE PLAN CREATED FROM ELECTRONIC DRAWING NAMED "17368-EC-C3D (Progress 2020-09-22).dwg", DATED 19 MAY 2019, REVISED 22 SEPTEMBER 2021 BY FELDMAN LAND SURVEYORS OF BOSTON, MASSACHUSETTS.
2. THE TEST BORING LOCATIONS SHOWN ARE CONSIDERED AS-DRILLED AND COORDINATES WERE CAPTURED BY A PROFESSIONAL LAND SURVEYOR.
3. TEST PIT LOCATIONS ARE CONSIDERED APPROXIMATE BASED ON THE PROPOSED LOCATIONS SHOWN ON PLANS.

0 20 40 60 80
SCALE IN FEET

HALEY ALDRICH

NUCLEAR METALS, INC. (NMI)
2229 MAIN STREET
CONCORD, MASSACHUSETTS

SITE AND SUBSURFACE EXPLORATION LOCATION PLAN - HOLDING BASIN

SCALE: AS SHOWN
SEPTEMBER 2022

FIGURE 1

Sheet: SITE AND SUBSURFACE EXPLORATION LOCATION PLAN - HOLDING BASIN
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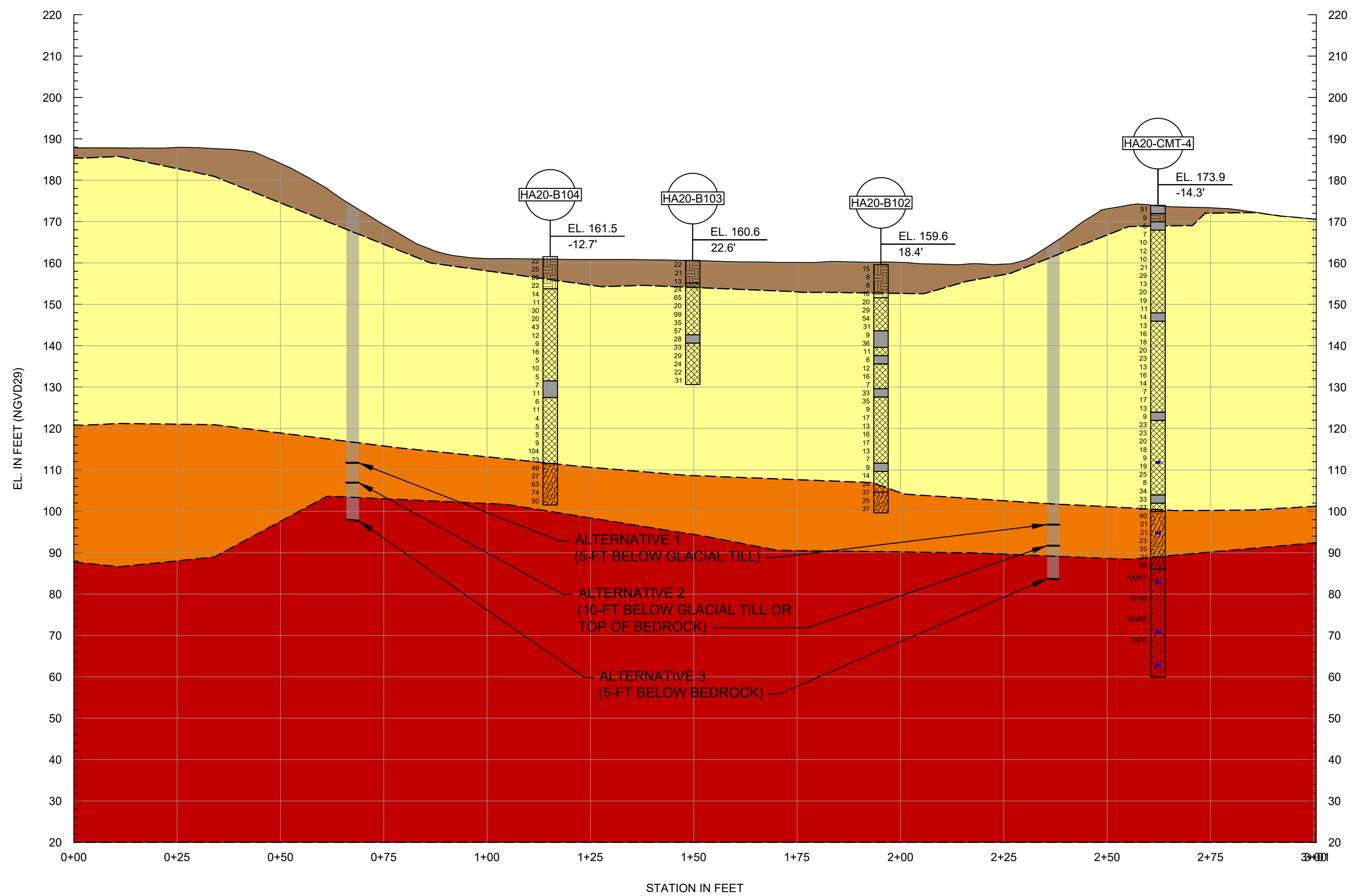
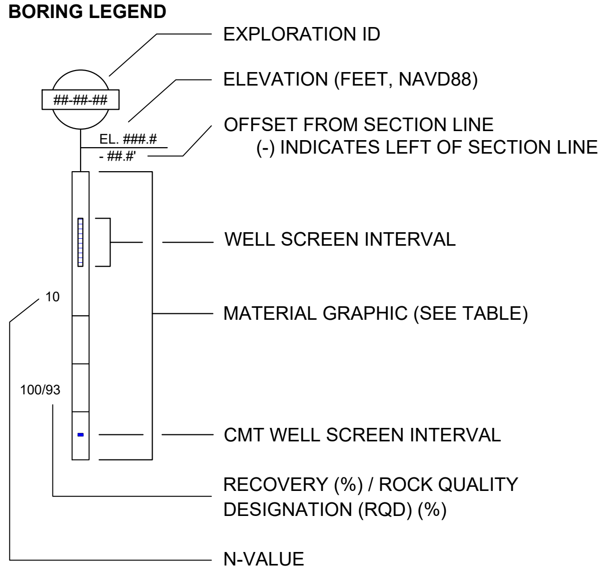
ZGARDNER
\\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\CAD\AOI 1\FIGURES\131884_004_000X-SITE-MODEL-GEO-WALL.DWG



BORING LEGEND



BORING STICK MATERIAL GRAPHIC LEGEND

- FILL
- NO RECOVERY
- ICE CONTACT DEPOSITS
- GLACIAL TILL (INCLUDING FLOW TILL)
- QUARTZ DIORITE
- GRANITE

GEOLOGIC LEGEND

- FILL
- ICE CONTACT DEPOSITS
- GLACIAL DEPOSITS (INCLUDING FLOW TILL AND GLACIAL TILL)
- BEDROCK

LEGEND

- EXISTING GROUND SURFACE
- INTERPRETED GEOLOGIC STRATA BREAK
- PROPOSED BOTTOM OF CUT-OFF WALL

NOTES

1. REFER TO FIGURE 1 FOR PLAN LOCATION OF BORINGS, SUBSURFACE PROFILE LOCATIONS, AND GENERAL EXISTING CONDITIONS.
2. OFFSET DISTANCES INDICATED ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE LINE, PERPENDICULAR TO THE LINE.
3. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
4. SUBSURFACE PROFILES DEPICT THE GENERAL GEOLOGIC CONDITIONS AT THE SITE AND ARE BASED ON INTERPRETATION OF DATA ENCOUNTERED IN THE EXPLORATIONS. LINES REPRESENTING INTERFACES BETWEEN STRATA ON THE PROFILE ARE BASED UPON INTERPOLATION BETWEEN ADJACENT BORINGS.
5. ELEVATIONS ARE IN FEET AND REFERENCE THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
6. HORIZONTAL CONTROL REFERENCES THE NORTH AMERICAN DATUM OF 1983 (NAD83), MASSACHUSETTS STATE PLANE, FEET.

HORIZ. 0 20 40 60 80
VERT. 0 20 40 60 80
SCALE IN FEET

HALEY ALDRICH

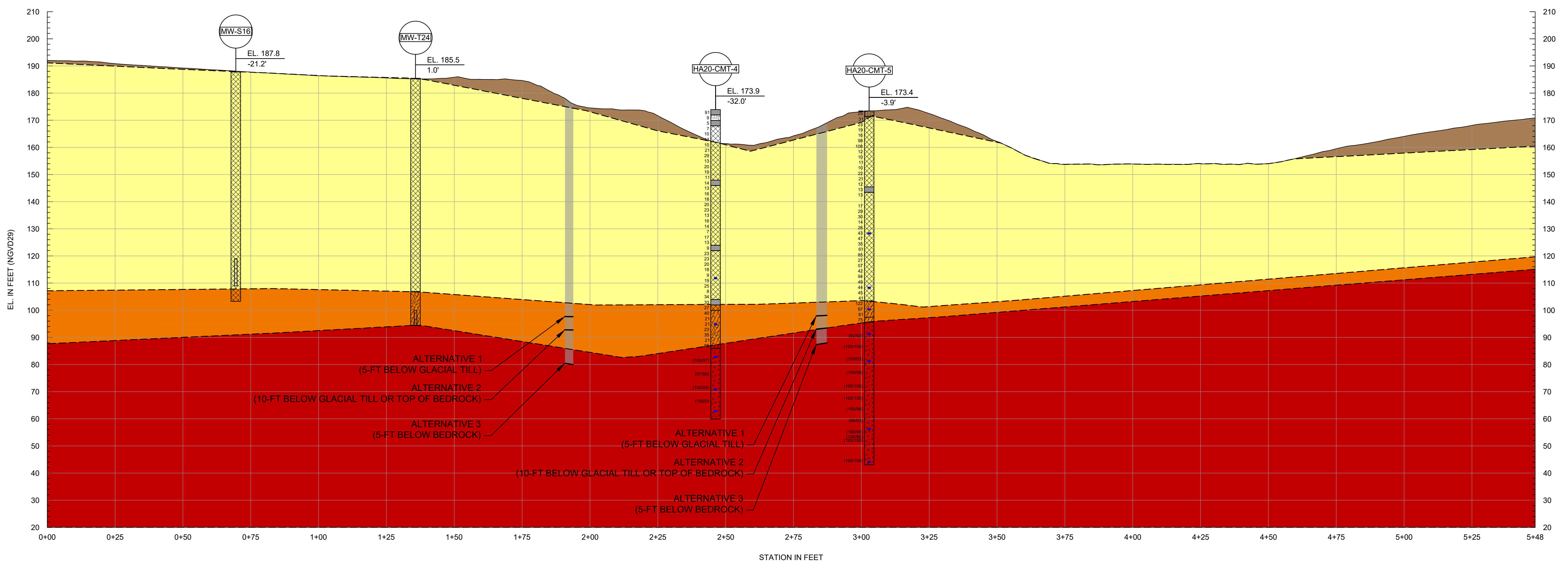
NUCLEAR METALS, INC. (NMI)
2229 MAIN STREET
CONCORD, MASSACHUSETTS

HOLDING BASIN CROSS SECTION A

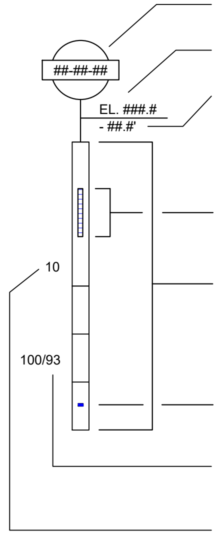
SCALE: AS SHOWN
SEPTEMBER 2022

FIGURE 2

Saved by: ZGARDNER Printed: 9/14/2022 1:03 PM Sheet: A
\\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\CAD\AO1 1\FIGURES\131884_004_000X-SITE-MODEL-GEO-WALL.DWG



BORING LEGEND



EXPLORATION ID

ELEVATION (FEET, NAVD88)

OFFSET FROM SECTION LINE
(-) INDICATES LEFT OF SECTION LINE

WELL SCREEN INTERVAL

MATERIAL GRAPHIC (SEE TABLE)

CMT WELL SCREEN INTERVAL

RECOVERY (%) / ROCK QUALITY DESIGNATION (RQD) (%)

N-VALUE

BORING STICK MATERIAL GRAPHIC LEGEND

- FILL
- NO RECOVERY
- ICE CONTACT DEPOSITS
- GLACIAL TILL (INCLUDING FLOW TILL)
- QUARTZ DIORITE
- GRANITE

GEOLOGIC LEGEND

- FILL
- ICE CONTACT DEPOSITS
- GLACIAL DEPOSITS (INCLUDING FLOW TILL AND GLACIAL TILL)
- BEDROCK

LEGEND

- EXISTING GROUND SURFACE
- INTERPRETED GEOLOGIC STRATA BREAK
- PROPOSED BOTTOM OF CUT-OFF WALL

NOTES

1. REFER TO FIGURE 1 FOR PLAN LOCATION OF BORINGS, SUBSURFACE PROFILE LOCATIONS, AND GENERAL EXISTING CONDITIONS.
2. OFFSET DISTANCES INDICATED ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE LINE, PERPENDICULAR TO THE LINE.
3. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
4. SUBSURFACE PROFILES DEPICT THE GENERAL GEOLOGIC CONDITIONS AT THE SITE AND ARE BASED ON INTERPRETATION OF DATA ENCOUNTERED IN THE EXPLORATIONS. LINES REPRESENTING INTERFACES BETWEEN STRATA ON THE PROFILE ARE BASED UPON INTERPOLATION BETWEEN ADJACENT BORINGS.
5. ELEVATIONS ARE IN FEET AND REFERENCE THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
6. HORIZONTAL CONTROL REFERENCES THE NORTH AMERICAN DATUM OF 1983 (NAD83), MASSACHUSETTS STATE PLANE, FEET.

HORIZ. 0 20 40 60 80
VERT. 0 20 40 60 80
SCALE IN FEET

HALEY ALDRICH

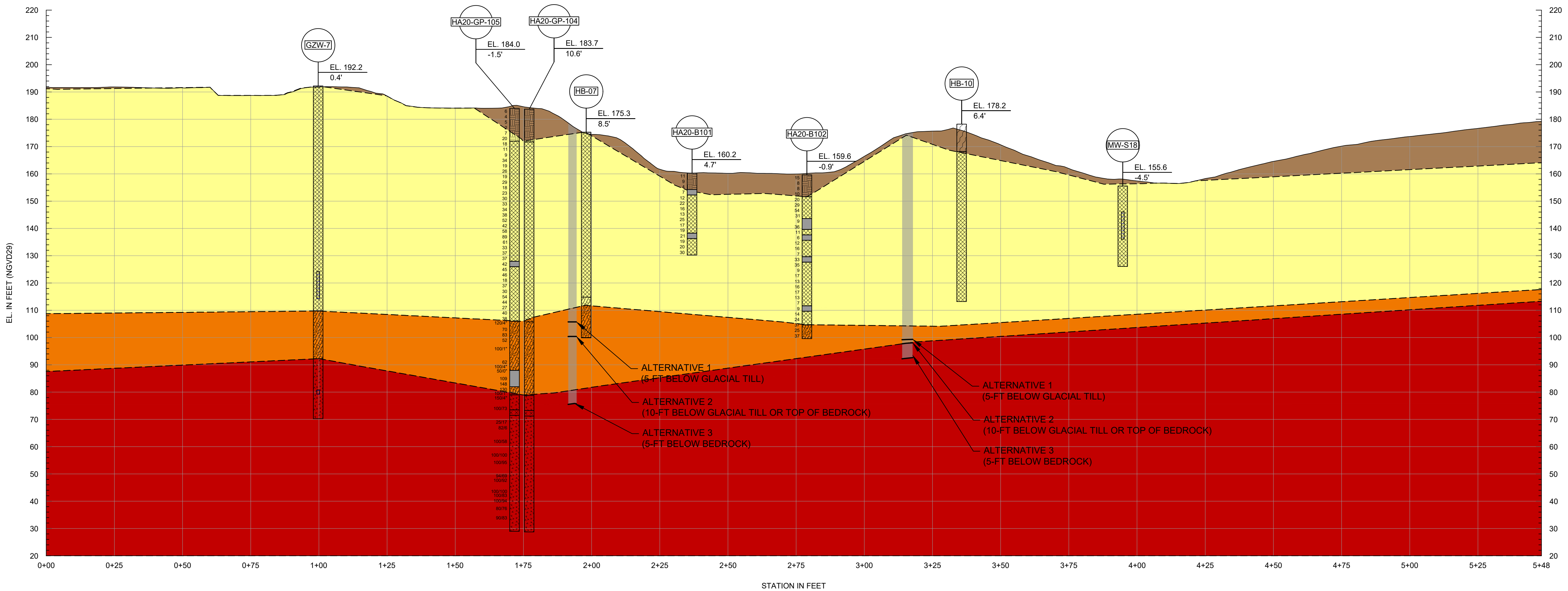
NUCLEAR METALS, INC. (NMI)
2229 MAIN STREET
CONCORD, MASSACHUSETTS

HOLDING BASIN CROSS SECTION B

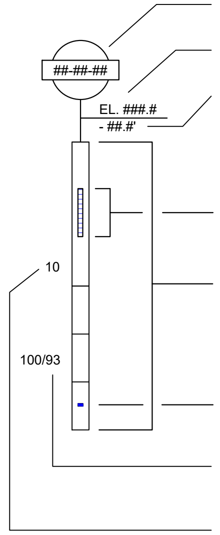
SCALE: AS SHOWN
SEPTEMBER 2022

FIGURE 3

Saved by: ZGARDNER Printed: 9/14/2022 1:04 PM Sheet: B
\\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\CADAO 1\FIGURES\131884_004_000X-SITE-MODEL-GEO-WALL.DWG



BORING LEGEND



- EXPLORATION ID
- ELEVATION (FEET, NAVD88)
- OFFSET FROM SECTION LINE (-) INDICATES LEFT OF SECTION LINE
- WELL SCREEN INTERVAL
- MATERIAL GRAPHIC (SEE TABLE)
- CMT WELL SCREEN INTERVAL
- RECOVERY (%) / ROCK QUALITY DESIGNATION (RQD) (%)
- N-VALUE

BORING STICK MATERIAL GRAPHIC LEGEND

- FILL
- NO RECOVERY
- ICE CONTACT DEPOSITS
- GLACIAL TILL (INCLUDING FLOW TILL)
- QUARTZ DIORITE
- GRANITE

GEOLOGIC LEGEND

- FILL
- ICE CONTACT DEPOSITS
- GLACIAL DEPOSITS (INCLUDING FLOW TILL AND GLACIAL TILL)
- BEDROCK

LEGEND

- EXISTING GROUND SURFACE
- INTERPRETED GEOLOGIC STRATA BREAK
- PROPOSED BOTTOM OF CUT-OFF WALL

NOTES

1. REFER TO FIGURE 1 FOR PLAN LOCATION OF BORINGS, SUBSURFACE PROFILE LOCATIONS, AND GENERAL EXISTING CONDITIONS.
2. OFFSET DISTANCES INDICATED ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE LINE, PERPENDICULAR TO THE LINE.
3. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
4. SUBSURFACE PROFILES DEPICT THE GENERAL GEOLOGIC CONDITIONS AT THE SITE AND ARE BASED ON INTERPRETATION OF DATA ENCOUNTERED IN THE EXPLORATIONS. LINES REPRESENTING INTERFACES BETWEEN STRATA ON THE PROFILE ARE BASED UPON INTERPOLATION BETWEEN ADJACENT BORINGS.
5. ELEVATIONS ARE IN FEET AND REFERENCE THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
6. HORIZONTAL CONTROL REFERENCES THE NORTH AMERICAN DATUM OF 1983 (NAD83), MASSACHUSETTS STATE PLANE, FEET.

HORIZ.	0	20	40	60	80
VERT.	0	20	40	60	80

SCALE IN FEET

HALEY ALDRICH

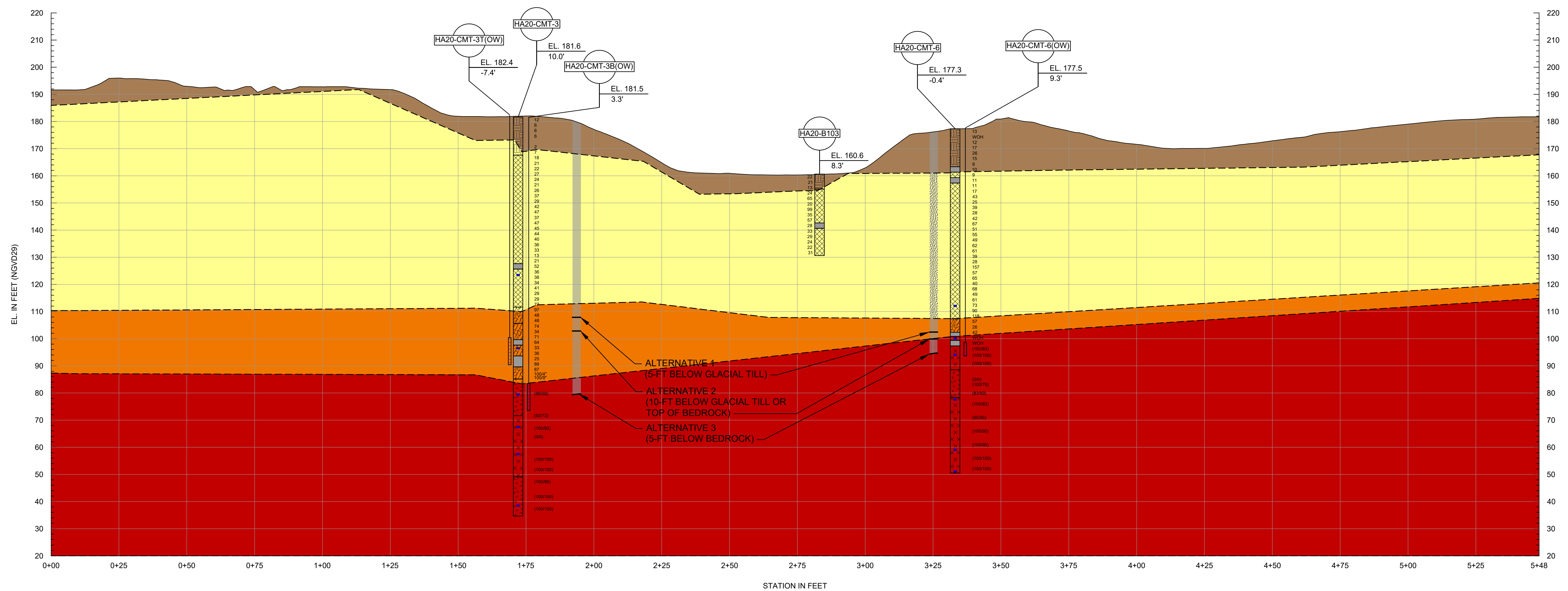
NUCLEAR METALS, INC. (NMI)
2229 MAIN STREET
CONCORD, MASSACHUSETTS

HOLDING BASIN CROSS SECTION C

SCALE: AS SHOWN
SEPTEMBER 2022

FIGURE 4

Saved by: ZGARDNER Printed: 9/14/2022 1:04 PM Sheet: C
\\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\CAD\AOI 1\FIGURES\131884_004_000X-SITE-MODEL-GEO-WALL.DWG



BORING LEGEND

- EXPLORATION ID
- ELEVATION (FEET, NAVD88)
- OFFSET FROM SECTION LINE
  (-) INDICATES LEFT OF SECTION LINE
- WELL SCREEN INTERVAL
- MATERIAL GRAPHIC (SEE TABLE)
- CMT WELL SCREEN INTERVAL
- RECOVERY (%) / ROCK QUALITY DESIGNATION (RQD) (%)
- N-VALUE

BORING STICK MATERIAL GRAPHIC LEGEND

- FILL
- NO RECOVERY
- ICE CONTACT DEPOSITS
- GLACIAL TILL (INCLUDING FLOW TILL)
- QUARTZ DIORITE
- GRANITE

GEOLOGIC LEGEND

- FILL
- ICE CONTACT DEPOSITS
- GLACIAL DEPOSITS (INCLUDING FLOW TILL AND GLACIAL TILL)
- BEDROCK

LEGEND

- EXISTING GROUND SURFACE
- INTERPRETED GEOLOGIC STRATA BREAK
- PROPOSED BOTTOM OF CUT-OFF WALL

NOTES

1. REFER TO FIGURE 1 FOR PLAN LOCATION OF BORINGS, SUBSURFACE PROFILE LOCATIONS, AND GENERAL EXISTING CONDITIONS.
2. OFFSET DISTANCES INDICATED ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE LINE, PERPENDICULAR TO THE LINE.
3. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
4. SUBSURFACE PROFILES DEPICT THE GENERAL GEOLOGIC CONDITIONS AT THE SITE AND ARE BASED ON INTERPRETATION OF DATA ENCOUNTERED IN THE EXPLORATIONS. LINES REPRESENTING INTERFACES BETWEEN STRATA ON THE PROFILE ARE BASED UPON INTERPOLATION BETWEEN ADJACENT BORINGS.
5. ELEVATIONS ARE IN FEET AND REFERENCE THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
6. HORIZONTAL CONTROL REFERENCES THE NORTH AMERICAN DATUM OF 1983 (NAD83), MASSACHUSETTS STATE PLANE, FEET.

HORIZ. 0 20 40 60 80
VERT. 0 20 40 60 80
SCALE IN FEET

HALEY ALDRICH

NUCLEAR METALS, INC. (NMI)
2229 MAIN STREET
CONCORD, MASSACHUSETTS

HOLDING BASIN CROSS SECTION D

SCALE: AS SHOWN
SEPTEMBER 2022

FIGURE 5

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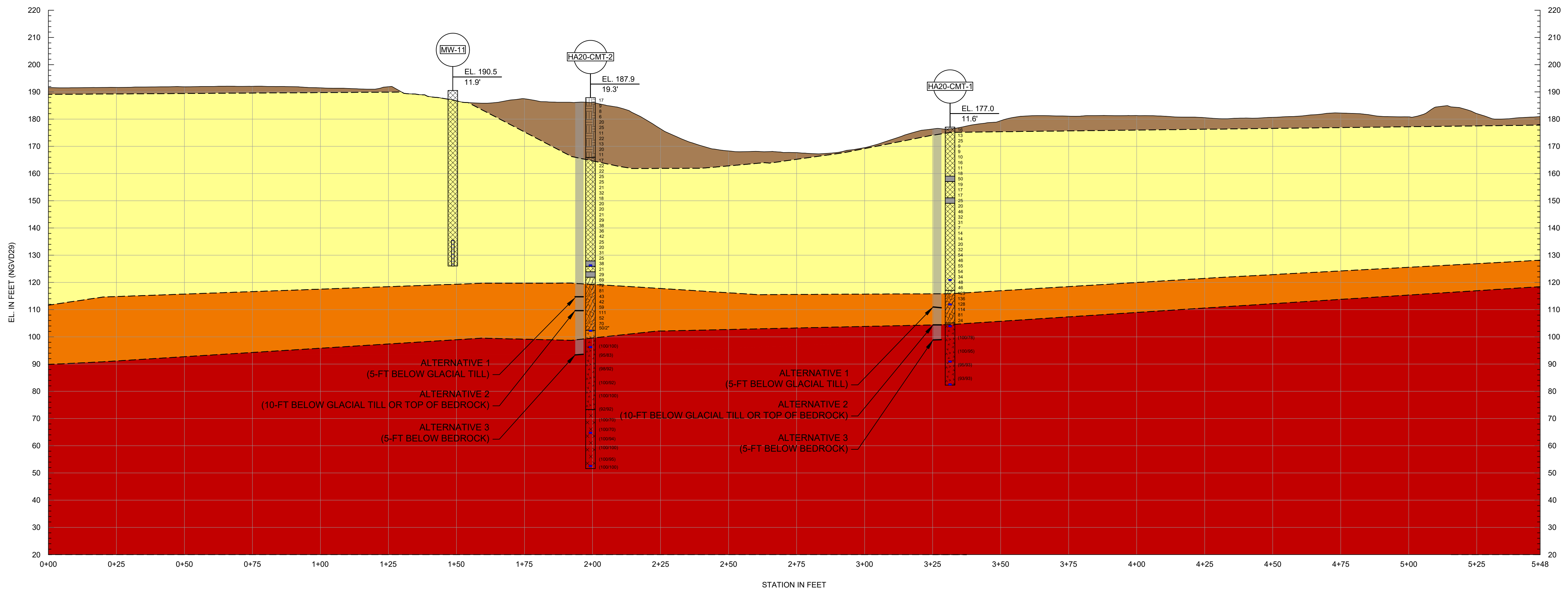
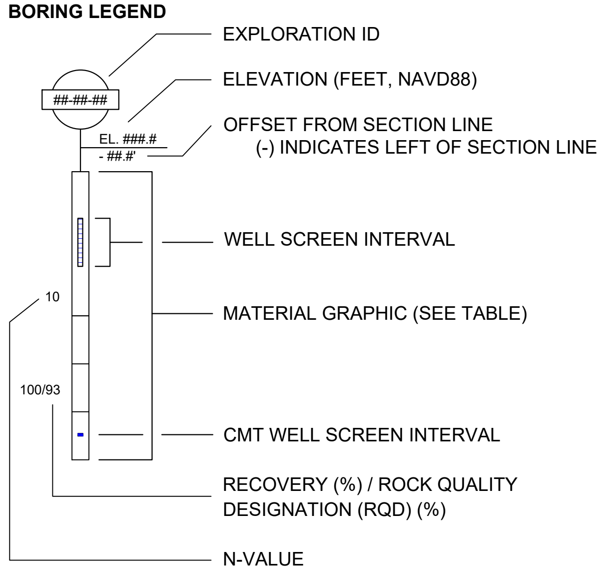
\\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\CADAO1 1\FIGURES\131884_004_000X-SITE-MODEL-GEO-WALL.DWG



BORING LEGEND



BORING STICK MATERIAL GRAPHIC LEGEND

- FILL
- NO RECOVERY
- ICE CONTACT DEPOSITS
- GLACIAL TILL (INCLUDING FLOW TILL)
- QUARTZ DIORITE
- GRANITE

GEOLOGIC LEGEND

- FILL
- ICE CONTACT DEPOSITS
- GLACIAL DEPOSITS (INCLUDING FLOW TILL AND GLACIAL TILL)
- BEDROCK

LEGEND

- EXISTING GROUND SURFACE
- INTERPRETED GEOLOGIC STRATA BREAK
- PROPOSED BOTTOM OF CUT-OFF WALL

NOTES

1. REFER TO FIGURE 1 FOR PLAN LOCATION OF BORINGS, SUBSURFACE PROFILE LOCATIONS, AND GENERAL EXISTING CONDITIONS.
2. OFFSET DISTANCES INDICATED ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE LINE, PERPENDICULAR TO THE LINE.
3. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
4. SUBSURFACE PROFILES DEPICT THE GENERAL GEOLOGIC CONDITIONS AT THE SITE AND ARE BASED ON INTERPRETATION OF DATA ENCOUNTERED IN THE EXPLORATIONS. LINES REPRESENTING INTERFACES BETWEEN STRATA ON THE PROFILE ARE BASED UPON INTERPOLATION BETWEEN ADJACENT BORINGS.
5. ELEVATIONS ARE IN FEET AND REFERENCE THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
6. HORIZONTAL CONTROL REFERENCES THE NORTH AMERICAN DATUM OF 1983 (NAD83), MASSACHUSETTS STATE PLANE, FEET.

HORIZ. 0 20 40 60 80
VERT. 0 20 40 60 80
SCALE IN FEET

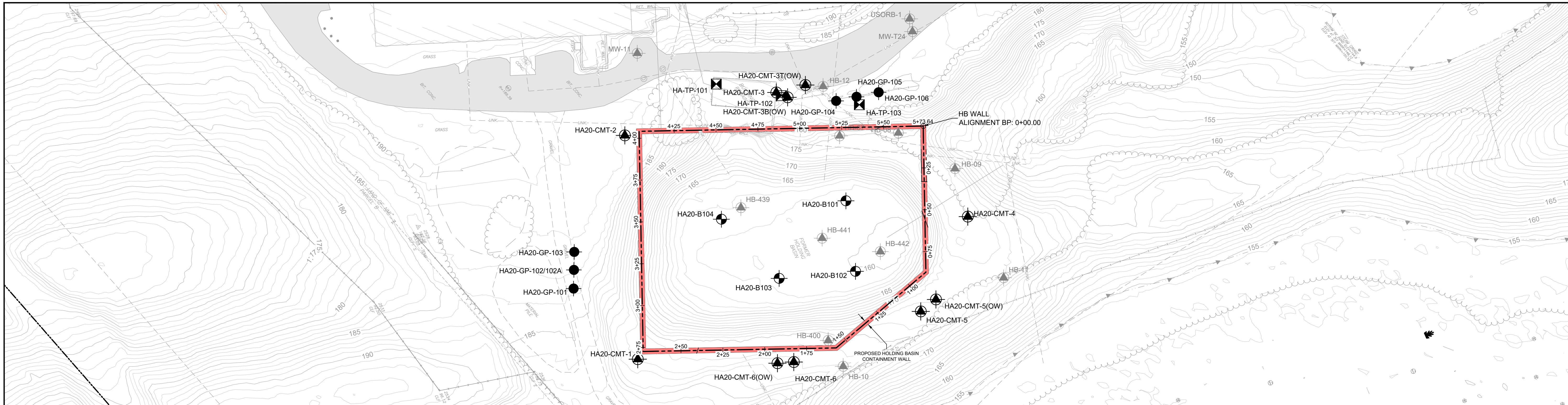
HALEY ALDRICH

NUCLEAR METALS, INC. (NMI)
2229 MAIN STREET
CONCORD, MASSACHUSETTS

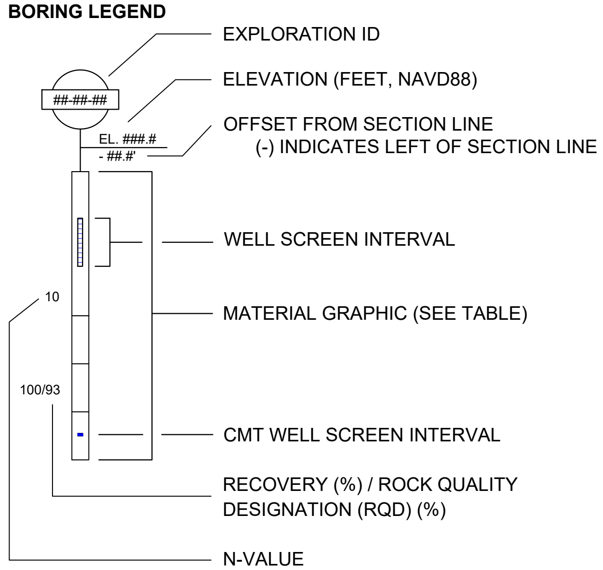
HOLDING BASIN CROSS SECTION E

SCALE: AS SHOWN
SEPTEMBER 2022

FIGURE 6



BORING LEGEND



BORING STICK MATERIAL GRAPHIC LEGEND

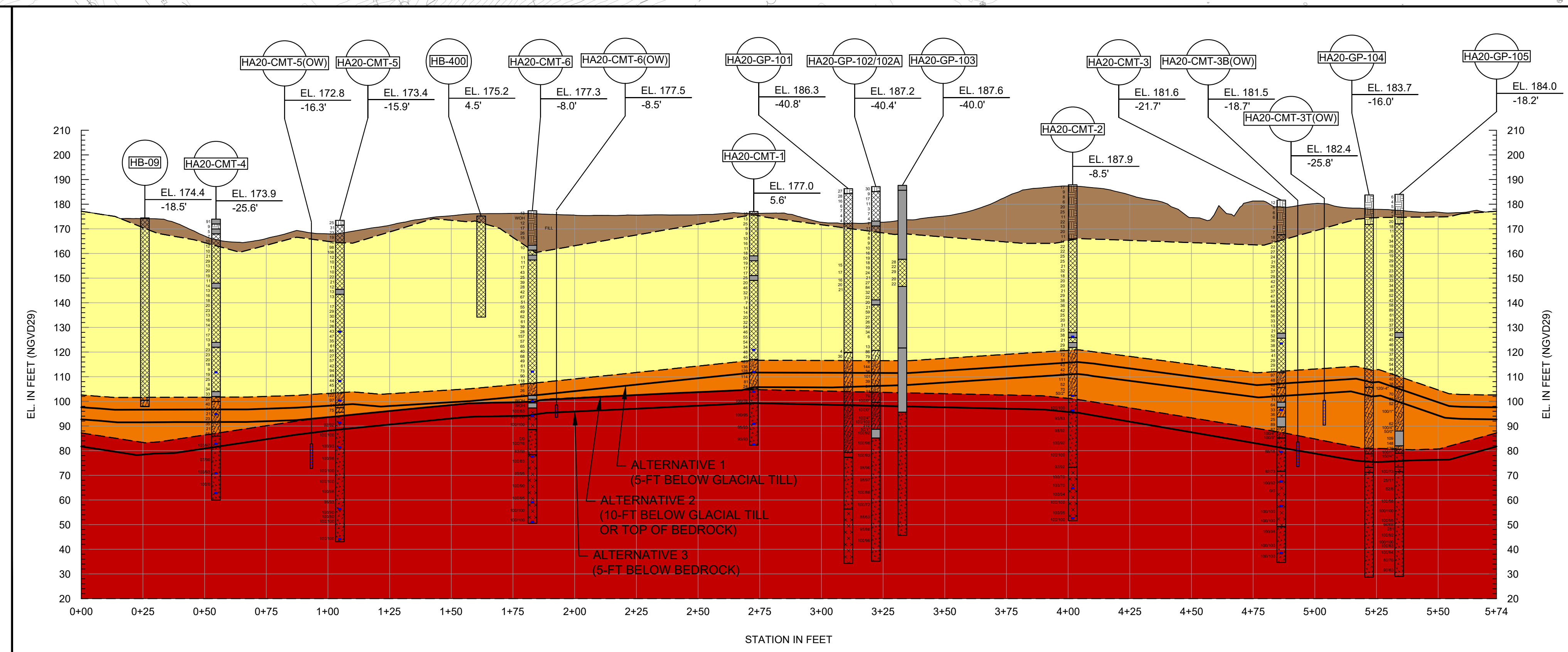
- FILL
- NO RECOVERY
- ICE CONTACT DEPOSITS
- GLACIAL TILL (INCLUDING FLOW TILL)
- QUARTZ DIORITE
- GRANITE

GEOLOGIC LEGEND

- FILL
- ICE CONTACT DEPOSITS
- GLACIAL DEPOSITS (INCLUDING FLOW TILL AND GLACIAL TILL)
- BEDROCK

LEGEND

- EXISTING GROUND SURFACE
- INTERPRETED GEOLOGIC STRATA BREAK
- PROPOSED BOTTOM OF CUT-OFF WALL



NOTES

1. REFER TO FIGURE 1 FOR PLAN LOCATION OF BORINGS, SUBSURFACE PROFILE LOCATIONS, AND GENERAL EXISTING CONDITIONS.
2. REFER TO FIGURE 2 FOR GENERAL NOTES.

HORIZ. 0 30 60 90 120
VERT. 0 30 60 90 120
SCALE IN FEET

HALEY ALDRICH

NUCLEAR METALS, INC. (NMI)
2229 MAIN STREET
CONCORD, MASSACHUSETTS

HOLDING BASIN CUT-OFF WALL ALONG ALIGNMENT (WITH ALTERNATIVES)

SCALE: AS SHOWN
SEPTEMBER 2022

FIGURE 7

Saved by: JGAINES Printed: 9/14/2022 12:51 PM Sheet: WALL-SECTION
\\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\CAD\AO1 1\FIGURES\131884_004_000X-SITE-MODEL-GEO-WALL.DWG

APPENDIX A

HB-1 - Geotechnical and Hydrogeologic Investigations for Containment Wall and Cap

PDI HB-1: Investigation of Holding Basin Footprint and Containment Wall Alignment

1 Scope of Work

The planned scope of work for this Pre-Design Investigation (PDI) for the holding basin (HB) involved collecting subsurface data needed to design the HB containment wall and the low hydraulic conductivity cap to meet the HB specific remedial action outlined in the Record of Decision (ROD). Activities performed in accordance with the HB PDI Work Plan (Work Plan) to meet the objectives of this PDI include:

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin	Collect geotechnical, seismic, and hydrogeologic data necessary to design a containment wall that prevents depleted uranium (DU) from migrating downgradient and meets the applicable or relevant and appropriate requirements (ARARs).	• Boring installation along the alignment of the cutoff wall into bedrock to evaluate soil density and bedrock characteristics by conducting standard penetration tests (SPTs) throughout the overburden of each of these borings, and coring bedrock for laboratory testing to aid in the design of the containment wall and construction methods. • Borehole geophysics to evaluate water bearing zones and bedrock fracture orientation. • Installation of continuous multi-level tubes (CMTs) to gain multi-level piezometric head and groundwater quality information to support hydraulic design of the containment wall and evaluating ARARs. • Observation wells (OWs) installation within bedrock boreholes located adjacent to the deep CMTs to allow for slug testing and short duration pumping to observe response in CMTs and other OWs. • Geotechnical Laboratory testing: grain size tests on overburden soils, compression strength tests on rock core, and Cerchar Abrasivity tests on rock core. • Conduct research on pump house foundation and utility alignments into pump house and conduct test pits to confirm utilities and structures (i.e., pump house slabs) that may need to be removed to enable wall construction or other adjacent remedial actions.

By completing the outlined scope of work, Haley & Aldrich, Inc. (Haley & Aldrich) was able to obtain the following information:

- Characterization of the groundwater flow within the overburden and fractured bedrock within the proposed containment wall area.
- Characterization of the geotechnical parameters of the overburden and bedrock by collecting soil and rock samples for grain size distribution testing of the soil, and abrasivity and compressive strength testing of the rock.
- Determination the geophysical properties of the bedrock and identification of the location and orientation of water bearing zones and fractures within the bedrock.
- Determination of the depth and extent of the glacial till stratum, the depth to bedrock within the proposed HB containment wall as well as measurements of the hydraulic conductivity of each discrete zone of overburden soils and bedrock.
- Characterization of groundwater quality data within each discrete zone including the overburden soils and bedrock within the HB containment wall area.

- Evaluation of the presence of subsurface structures associated with the pump house which may need to be removed to enable wall construction or other adjacent remedial actions.
- Characterization of soil density and stratigraphy below the footprint of the HB to evaluate the potential for settlement of subgrade soils due to the loading of the fill section to grade the footprint of the HB to construct a cap. *Note: this is touched on briefly within this report but covered in more detail within the HB-4 Summary.*

Data collected during this PDI will be used to design the containment wall thickness, depth, alignment, and constructability. Data obtained during HB-1 investigations will also be used to evaluate alternative designs of the final grading and cap design.

2 Summary of Work

This PDI included:

- Drilling of six (6) investigation borings and installation of CMTs within the six (6) completed boreholes;
- Installation of four (4) observation wells;
- Completion of a series of laboratory tests to evaluate soil and bedrock conditions;
- Drilling of six (6) boreholes for two (2) transects of cross-hole seismic testing;
- Collection of borehole geophysics data from eight (8) of the drilled boreholes (a combination of the locations completed for CMTs and center location of each of the cross-hole seismic testing transects); and
- Completion of three (3) test pits to confirm the limits of the former pump house.

The locations of the explorations are shown on Figure 1 of *HB Summary Report* and Table HB1-1 provides a summary of the depth and type of well installation for each location.

2.1 TEST BORING DRILLING

To evaluate subsurface geologic and geotechnical conditions, borings were advanced 20 to 50 feet (ft) into bedrock from October 2020 through January 2021 around the perimeter of the HB. Test borings were also drilled within the HB to depths ranging from 30 to 60 ft below ground surface.

Boreholes were advanced using sonic drilling methods in the overburden and bedrock of each borehole. Overburden soil was logged continuously in a 6-inch (in.) borehole and SPT was performed using split spoons to make a qualitative assessment of soil density. The SPT data was collected using a calibrated auto-hammer. The SPT data was not needed to be adjusted as the autohammer showed that the energy transmitted was typically within 87% of the SPT test of a 30 inch drop of a 140 lb. weight. Overburden samples were collected for grain size distribution testing.

Sonic drilling was performed with a PQ diameter (Roschen™ Genuine Q wireline system core barrel designation) wireline barrel, which yields 3.3 in. diameter bedrock cores. Bedrock was cored to evaluate rock characteristics and measure rock quality designation (RQD) for every core-run, which was at 5 ft intervals. Bedrock was cored up to 20 ft in three (3) of the borings and up to 50 ft in three (3) of the borings. Two (2) of the six (6) cross-hole seismic boreholes were also advanced in the same methods as described above. The other four (4) cross-hole borings were advanced to the prescribed depths using sonic drilling methods. Rock cores were preserved for geotechnical testing including unconfined compression strength tests and Cerchar abrasivity tests. The rock core testing was performed by Geotesting Express of Acton, Massachusetts.

The following borings were installed during the HB-1 PDI work: HA20-CMT-1 through HA20-CMT-6, HA20-GP-101 through HA20-GP-106, HA20-GP-102A, and HA20-B101 through HA20-B104. Locations of the borings are shown on Figure 1 of *HB Summary Report*, and boring logs and the SPT auto-hammer calibration records are in included in Exhibit HB1-1.

2.2 GEOPHYSICS FIELD COLLECTION

A borehole geophysical survey was conducted from October 2020 through January 2021 in eight (8) completed boreholes (HA20-CMT-1, HA20-CMT-2, HA20-CMT-3, HA20-CMT-4, HA20-CMT-5, HA20-CMT-6, HA20-GP-102A, and HA20-GP-105). The geophysical survey was conducted by Geophysical Applications, Inc., and consisted of lowering a series of downhole tools to the bottom of the exploration. Borehole logs are included in Exhibit HB1-2.

These tools measured the characteristics of the borehole and characterized the depths and orientations of bedrock fractures. The tools included: a fluid temperature (FTemp) sensor, fluid resistivity (FRes) sensor, three-arm mechanical caliper, optical televiewer, acoustic televiewer, and heat-pulse flowmeter.

The fluid-property logs were recorded by sensors (Mt. Sopris model 2FSB-1000) mounted on the bottom of a caliper probe (Mt. Sopris model 2CAA-1000), during the first logging run down each borehole. Fluid properties were recorded while lowering the probe at a cable speed of 5 ft per minute; the caliper log was recorded at a speed of 12 ft per minute.

Optical televiewer imaging was performed using an Advanced Logic Technology (ALT) model OBI40 MkIV optical televiewer probe. This device provides a full-color digital image of the borehole's interior, oriented with respect to both vertical and magnetic north. The OBI40 image was recorded using a vertical sampling interval of 0.007 ft, with one pixel for each degree of arc around the borehole's interior. The images from the optical televiewer allowed for viewing of geologic elements that exhibit contrasting colors (e.g. bedding bands of light or dark-colored minerals, or iron-oxide staining at hydraulically-active bedrock fractures).

Acoustic televiewer imaging was performed using an ALT model ABI40 acoustic televiewer probe. This device imaged the interiors of the bedrock boreholes via ultrasound pulses. ABI40 images were interpreted to measure the dip angle and down-dip azimuth of both tight and physically open planar features (bedding, joints, and fractures) encountered within each bedrock borehole.

Flowmeter testing was performed using a Mount Sopris model HPF-2293 heat-pulse flowmeter probe. This device heated a small volume of water that served as a tracer pulse. The length of time needed for the warm water to pass a thermistor mounted above or below the heating element, allowed calculation of the flow rate in gallons per minute (gpm). Flowmeter measurements were performed during ambient (non-pumping) conditions to identify transmissive fractures encountered by the bedrock boring that exhibit differing hydraulic head. The measurements were repeated under pumping conditions to identify fractures that contribute to groundwater recharge in each borehole. Flowmeter testing was performed at depths near hydraulically active fractures, which were determined based on results of the fluid-property, caliper, and acoustic televiewer logs.

The data collected from the survey was used to identify the location of hydraulically dominant fracture zones, and define the nature, extent, and orientation of fractures. This data was used to determine the intervals to screen observation wells and CMT intervals in each borehole.

2.3 CMT WELL INSTALLATION

Solinst CMTs wells were installed from 10 December 2020 through 15 January 2021 in six (6) of the boreholes (HA20-CMT-1 through HA20-CMT-6) following completion and interpretation of the geophysical survey described in Section 2.2 and prior to completing the remaining cross-hole seismic boreholes. The CMT installation logs are included in Exhibit HB1-3.

Each CMT well was installed with three (3) to seven (7) ports. Locations of the ports in the bedrock were based on the results of the geophysical survey such that the ports were installed within the hydraulically active fracture sets. In addition, some ports were placed in the overburden based on previously observed geologic conditions. Dual CMT ports, where one port is used to monitor water level and the other is equipped with dedicated tubing for groundwater sampling within the same geologic unit, were installed at some locations. CMT wells were constructed using a stainless-steel mesh surrounding the opening port, secured with clamps, and backfilled with a sand pack. CMT well installation was performed by a Trained CMT Contractor as certified by the manufacturer. The driller that completed the work is Cascade Environmental Drilling, and the personnel onsite were certified CMT installers. Table HB1-1 provides a summary of the installed CMT channels, including the formation screened and the elevation of each channel.

As there is no conventional well screen in the CMTs, each port needed to be developed to establish a hydraulic connection with the formation. Each CMT port was developed prior to sampling using a peristaltic pump, a mini-inertial pump, or similar.

2.4 OBSERVATION WELLS

Four (4) observation wells were installed between 8 January 2021 and 16 January 2021. Three (3) completed boreholes were used for the wells (HA20-CMT-3(OW), HA20-CMT-5(OW), and HA20-CMT-6(OW)) with each located adjacent to the three (3) deeper CMT instrumented boreholes. Based on the subsurface conditions encountered at the HA20-CMT-3 location, an additional well screened in the glacial till strata was proposed. This location had a thicker sequence of glacial till and the additional well could provide additional data on potential depths of the proposed containment wall. This additional well was installed and designated HA20-CMT-3T(OW).

Wells were constructed with 2 in. machine-slotted polyvinyl chloride (PVC) screen and 2 in. PVC riser pipe. The location of the well screen, screen slot size, and filter pack was determined based on field conditions. Table HB1-1 includes a summary of the well screen intervals, the formations screened, and the elevations of the screened interval. The observation well logs are included in Exhibit HB1-3.

Following the installation, observation wells were developed in accordance with NMI-GW-002 Monitoring Well Development Operating procedure included in the Field Sampling Plan (FSP).

2.4.1 Groundwater Elevation Monitoring

Groundwater levels were measured in all the CMT channels and observation wells following well development. An additional round of site-wide groundwater levels was also conducted prior to an April 2021 sampling event. Table HB1-2 includes a summary of the groundwater monitoring events and additional rounds of groundwater monitoring conducted around the HB during the PDI work.

2.4.2 Hydrogeologic Testing

A series of field tests were performed within select observation wells to evaluate hydrogeologic properties, which included monitoring the results from field testing such as pulse testing, short duration pumping tests, and slug tests on completed observation wells and CMTs. Test results provided an estimate of the hydraulic conductivity (k) of each hydrogeologic unit within the area of the proposed HB containment wall. Pneumatic slug tests were performed at each CMT well port and rising/falling head slug tests were performed at observation wells installed in this PDI. Additionally, short-duration pumping tests were performed at the 2 in. diameter observation wells.

2.4.2.1 Slug Tests

In-situ slug tests were performed at observation wells HA20-CMT-3T(OW), HA20-CMT-3B(OW), HA20-CMT-5(OW), and HA20-CMT-6(OW) to estimate hydraulic conductivity. This testing included rising and falling head slug tests. The tests were recorded using a pressure transducer (Solinst Levelogger™) placed at the bottom of the observation well, which measured water pressure every two (2) seconds during testing. Static water level was measured prior to testing to convert the water pressure to feet of water over the pressure transducer. Testing consisted of lowering a sand-filled Teflon tube (i.e., slug bar) into the well, which raised the water level by displacing water within the well. The recovery rate of the water to reach static level is a falling head slug test. Once that test was completed, the slug bar was removed, and the resulting displacement of the water was lower than static. The rate of recovery to static water level for this portion of the test is a rising head permeability test. The falling and rising head tests were repeated up to three (3) times on each well.

2.4.2.2 Short Duration Pumping Tests

Following well installation and development, Haley & Aldrich performed a series of groundwater pumping tests on the observation wells installed in this PDI to evaluate aquifer properties. The test method consisted of placing a Geotech Geosub-2 submersible pump and Solinst Levelogger™ Model 3001 (Levelogger) in the corresponding pumping well and two (2) surrounding observation wells. The leveloggers were placed at the bottom of the pumping and observation wells, which are equipped with a pressure transducer that measures water pressure and a self-contained electronic data acquisition system. Haley & Aldrich also installed a Solinst Barologger™ to compensate for changes in barometric pressure during the pumping tests.

The water level response in the pumping well and surrounding were monitored and recorded every two (2) seconds in the pumping well and every five (5) seconds in the observation wells during the pumping test. In addition, water levels in surrounding CMT well ports were manually monitored using a hand-held water level meter throughout the duration of each pumping test.

2.4.3 Groundwater Sampling

Groundwater sampling was completed following the installation of the observation wells and CMT wells as part of the site-wide groundwater monitoring event conducted in April 2021. A total of 18 groundwater samples were collected from the recently installed CMTs and OWs during the April monitoring event. The OWs and CMT channels that were sampled were analyzed for the target chemicals of concern listed in the site ROD in order to characterize groundwater quality within the discrete geologic zones of the proposed HB containment wall area.

Groundwater sampling was performed using low-flow methodology as outlined in the U.S. Environmental Protection Agency (EPA) Low-Stress (Low-Flow) Standard Operating Procedure EQASOP-GW4. A copy of the NMI-GW-010 was included in the FSP.

2.5 TEST PITS FOR EVALUATING UTILITY ALIGNMENT AND STRUCTURAL SUPPORT OF FORMER PUMP HOUSE

The existing pump house, sometimes referred to as the tank house, is located nearby the alignment of the proposed HB containment wall, and accordingly, associated subsurface structures and utilities may need to be removed to enable wall construction or other adjacent remedial actions. The Schematic included as Figure HB1-1 shows the historic drawing of the Pump House. Figure 1 of the Holding Basin PDI Report shows the proposed alignment of the HB wall and the locations of the borings.

To assess the presence of subsurface structures and utilities, this PDI included a review of available information, including drawings, to determine pump house foundation details (including type and approximate depths), and identification of any potential utility alignments associated with the pump house.

In addition to the review of available information, three (3) test pits (HA-TP-101 through HA-TP-103) were excavated to varying depths 21 April 2021. The test pits were excavated adjacent to the former tank house and north of the tank house to evaluate if utilities penetrate the tank house (as shown on Figure HB1-1) and observe foundations at the pump house. Test pit logs are included in Exhibit HB1-1.

3 Deviations from Work Plan

As discussed in Section 2.4.1, an additional well was screened in the glacial till strata based on the subsurface conditions encountered at the HA20-CMT-3 location. The added location, HA29-CMT-3T (OW), had a thicker sequence of glacial till and the separate well provided additional data on potential depths considered for the containment wall.

4 Results

4.1 GEOTECHNICAL PROPERTIES

4.1.1 Overburden

The subsurface soil descriptions are included on the boring logs in Exhibit HB1-1 and supplemented with grain size distribution testing included in Exhibit HB1-4. Up to 15 soil samples were specified in the Work Plan, but only 12 samples were collected for grain size distribution testing due to consistency in observed soil conditions. Overburden conditions were classified within the HB (HA20-B101 through HA20-B104) and conditions encountered at the test borings generally consist of loose to medium dense Fill (poorly graded SAND, 6 to 8 ft thick) overlying loose to medium dense Ice Contact Deposits (poorly graded SAND, silty SAND, and sandy SILT, up to 47 ft thick). The Ice Contact Deposits were penetrated at two (2) boring locations where medium dense to dense Glacial Till (poorly graded SAND) was encountered in thicknesses of 5 to 10 ft prior to terminating borings. Bedrock was not encountered at the borings inside the HB but is expected to be approximately 80 ft below existing ground surface.

4.1.2 Bedrock

The full core descriptions of the bedrock can be found in boring logs for HA20-CMT-1, HA20-CMT-2, HA20-CMT-3, HA20-CMT-4, HA20-CMT-5, and HA20-CMT-6 included in Exhibit HB1-1, and the photographs and lab testing of the rock core is included in Exhibit HB1-5. The geotechnical data of the rock testing results are provided in Table HB1-3. The Rock Quality Designation (RQD) observed in the rock cores varied between 6% and 100%; generally, the RQD values were between 70% and 95%.

The bedrock has very high compressive strength, ranging from 2,878 to 31,073 pounds per square inch (psi), and the abrasivity is characterized as high (2.00) to extreme (6.00) abrasiveness.

4.2 HYDROGEOLOGIC TESTING AND RESULTS

The data collected from the CMT channels and observation wells around the HB are summarized in Table HB1-4.

Coupled with the chemical testing data, the results from the hydrogeological testing were used to evaluate the potential contaminant pathway and determine the appropriate depth the HB containment wall should penetrate to mitigate the potential migration pathways of contaminants of concern. These results were incorporated into the groundwater modeling completed as part of HB-5 PDI work.

4.2.1 Slug Testing and Results

The recovery data, or rising and falling head data, was interpreted using the Bouwer & Rice and Butler analytical methods. The geometric means of hydraulic conductivity slug test results are summarized below and additional back up information is provided in Exhibit HB1-6.

Well ID	Screen Interval Elevation (ft)	Screen Lithology	Solution	Estimated Hydraulic Conductivity (cm/sec)	Estimated Hydraulic Conductivity (ft/day)
HA20-CMT-3T	110.41 – 90.41	Glacial Till	Bouwer-Rice FH[1]	2.30E-06	0.0065
			Bouwer-Rice RH[2]	3.28E-06	0.0093
			Geomean	**2.75E-06**	**0.0078**
HA20-CMT-3B	83.53 - 73.53	Shallow Bedrock	Bouwer-Rice FH	5.18E-05	0.1469
			Bouwer-Rice RH	1.50E-04	0.4246
			Geomean	**8.81E-05**	**0.2497**

[1] Bouwer-Rice FH: represents results from falling head test procedure.
[2] Bouwer-Rice RH: represents results from rising head test procedure.

Well ID	Screen Interval Elevation (ft)	Screen Lithology	Solution	Estimated Hydraulic Conductivity (cm/sec)	Estimated Hydraulic Conductivity (ft/day)
HA20-CMT-6	98.54 - 93.54	Shallow Bedrock	Bouwer-Rice FH	6.58E-05	0.1866
			Bouwer-Rice RH	7.60E-05	0.2153
			Geomean	**7.07E-05**	**0.2004**
HA20-CMT-5	82.79 - 72.79	Intermediate Bedrock	Bouwer-Rice FH	5.53E-05	0.1566
			Bouwer-Rice RH	4.43E-05	0.1256
			Geomean	**4.95E-05**	**0.1403**

4.2.2 Short Duration Pumping Testing and Results

The pumping test consisted of pumping water from the pumping well at a rate that ranged from approximately 0.3 to 3.0 gpm. The geometric means of the pumping test results are summarized below and additional back up information is provided in Exhibit HB1-7.

Well ID	Screen Interval Elevation (ft)	Screen Lithology	Solution	Estimated Transmissivity (ft2/day)	Estimated Hydraulic Conductivity (cm/sec)
HA20-CMT-3B	83.53 - 73.53	Shallow Bedrock	Hantush-Jacob E[3]	0.798	2.17E-05
			Hantush-Jacob R[4]	0.868	2.36E-05
			Geomean	**0.833**	**2.26E-05**
HA20-CMT-6	98.54 - 93.54	Shallow Bedrock	Hantush-Jacob E	0.275	6.94E-06
			Hantush-Jacob R	0.091	2.29E-06
			Geomean	**0.158**	**3.99E-06**
HA20-CMT-5	82.79 - 72.79	Intermediate Bedrock	Hantush-Jacob E	0.991	4.37E-05
			Hantush-Jacob R	0.215	9.47E-06
			Geomean	**0.461**	**2.03E-05**

4.3 TEST PIT SUMMARY

Test pits conducted to investigate the pump house area indicate portions of the slab and foundation wall are present nearby the planned HB containment wall alignment. While the wall alignment does not run though the pump house, the pump house may need to be removed to enable wall construction or other adjacent remedial actions. The limits of the below grade structures as they are understood from historic drawings were confirmed for the containment wall design as part of this PDI.

[3] Hantush-Jacob E: results represent curve match for entire test duration.
[4] Hantush-Jacob R: results represent curve match for late time data, or recovery portion of pumping test.

4.4 GROUNDWATER QUALITY

Compilation of groundwater quality and the subsurface conditions are shown by the Geosyntec profile, Figure HB1-2, compiled from the PDI work completed by Geosyntec for the groundwater plume. Groundwater quality plotted on the Geosyntec profile is from the April 2021 round of groundwater sampling and analysis.

5 Summary of Future Design Considerations

5.1 CONSIDERATIONS FOR CONTAINMENT WALL DESIGN

The primary objective of the containment wall is to mitigate the migration of DU from the source area of the site, which is the holding basin. The primary pathway of DU is through the overburden deposit. The ice contact deposit overlying the glacial till and bedrock contains the significant mass of DU. In order to contain the DU within the sand and gravel ice contact deposit, the containment wall needs to penetrate at least 5 ft into the underlying glacial till. However, as shown on Figures 2 through 6 of *HB Summary Report*, the glacial till thickness is variable along the alignment of the containment wall. As a result, the alternative wall embedments are being evaluated based on the subsurface conditions include:

- 5 ft embedment into glacial till
- 10 ft embedment into glacial till or to top of bedrock
- 5 ft embedment into bedrock

The containment wall alignment and these alternative embedments are shown in plan and profile on Figure 7 of *HB Summary Report*. As a part of the 30% RD, cost, seepage modeling data, and mix design specifications will be considered in order to determine an appropriate well embedment.

Information on the physical properties of the bedrock obtained during this PDI will be used to further evaluate constructability factors for excavating the overburden using a clam shell and hydromilling of the bedrock as necessary to achieve appropriate cutoff depth of the installed containment wall. These characteristics of the rock will be important in the developing the 30% RD of the containment wall.

5.2 GROUNDWATER EVALUATION

A series of hydrogeologic tests were performed on the newly installed wells to characterize groundwater flow within the proposed containment wall alignment. It is not expected that the final alignment of the wall will incorporate all saturated soils where DU is present. Otherwise, it would need to extend to encompass essentially the full extent of the groundwater DU plume. DU in soil and groundwater inside and outside the wall alignment will also be treated with In-Situ Stabilization (ISS).

The HB containment wall PDIs, incorporated as subsequent Appendices, include the seismic analysis (HB-2, Appendix B), mix design for the wall material (HB-3, Appendix C), slope stability (HB-4, Appendix D), and the seepage analysis (HB-5, Appendix E). In addition, the ISS of the soils within the HB and the plume core is also part of the overall remedy for containment of the DU. Furthermore, Institutional Controls (ICs) will be in place once the HB remedy is completed to prevent future excavation or development of the footprint of the HB.

5.3 GEOTECHNICAL EVALUATION AND CONSIDERATIONS FOR CAP DESIGN

Fill inside the holding basin and the sand and gravel deposit below groundwater will have injections of apatite and other materials to sequester the uranium within the footprint of the HB. In order to allow for the injections of apatite there will be some interim grading conducted to fill the HB to about elevation (El.) 170 so the injections can extend vertically down along the current steep side slopes of the HB. The final grades of the HB with a low permeability cap will be about flush with the top elevation of the HB, which varies from about El. 185 to El. 175. The underlying Ice Contact Deposits and Glacial Till are not anticipated to settle significantly under new loading from up to approximately 25 ft of fill to be placed during closure of the holding basin. Due to the granular nature of the natural soils, most of the settlement resulting from placement of new fill is anticipated to occur within a few months after final grade has been reached and settlement should not be of magnitude that will damage the cover system or adversely impact grading to provide positive surface drainage from the area. Long-term consolidation settlement of the natural soils is not anticipated. Additional analysis related to capping is included in the HB-4 PDI Summary.

ATTACHMENTS

TABLES

Table HB1-1 – Summary of CMT And OW Well Installation
Table HB1-2 – Summary of Groundwater Elevation Data
Table HB1-3 – Summary of Geotechnical Data of Rock Testing Results
Table HB1-4 – Summary of Groundwater Quality Data

FIGURES

Figure HB1-1 – Historic Tank House Plan
Figure HB1-2 – Uranium Concentrations in Groundwater through July 2021

EXHIBITS

Exhibit HB1-1 – Test Boring Logs, Test Pit Logs, and Auto-Hammer Calibration Reports
Exhibit HB1-2 – Geophysical Borehole Logs
Exhibit HB1-3 – Observation Well and CMT Well Installation Logs
Exhibit HB1-4 – Grain Size Distribution Testing Results
Exhibit HB1-5 – Bedrock Core Photo-Logs and Rock Core Testing Results
Exhibit HB1-6 – Summary of Slug Testing Results and Analysis
Exhibit HB1-7 – Summary of Pumping Test Data Collection and Analysis

HB1 TABLES

TABLE HB1-1
SUMMARY OF CMT AND OW INSTALLATIONS
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Well ID	Formation	Total Depth/ CMT Number	Top of Screen (BGS)	Bottom of Screen (BGS)	Top of Screen Elevation (ft NGVD	Bottom of Screen Elevation (ft NGVD	Ground Surface Elevation (ft NGVD	Reference Elevation (ft NGVD 1929)
HA20-CMT-3B(OW)	Bedrock	108	98	108	83.53	73.53	181.53	184.3
HA20-CMT-3T(OW)	Glacial Till	92	82	92	100.41	90.41	182.41	184.79
HA20-CMT-5(OW)	Bedrock	100	90	100	82.79	72.79	172.79	175.64
HA20-CMT-6(OW)	Bedrock	84	79	84	98.54	93.54	177.54	180.29
HA20-CMT-1S	Overburden (Ice Contact Deposits)	1 and 4	55.9	56.4	121.64	121.14		180.13
HA20-CMT-1I	Glacial Till	2	64.9	65.4	112.64	112.14		180.13
HA20-CMT-1D$_{1}$	Shallow Bedrock	3 and 6	72.9	73.4	104.64	104.14	177.54	180.13
HA20-CMT-1D$_{2}$	Intermediate Bedrock	5	85.9	86.4	91.64	91.14		180.13
HA20-CMT-1D$_{3}$	Deep Bedrock	7	94.3	94.8	83.24	82.74		180.13
HA20-CMT-2S	Overburden (Ice Contact Deposits)	4 and 1	61.4	61.9	126.50	126.00		190.85
HA20-CMT-2I	Shallow Bedrock	5 and 2	85.4	85.9	102.50	102.00		190.85
HA20-CMT-2D$_{1}$	Shallow Bedrock	3	91.4	91.9	96.50	96.00	187.9	190.85
HA20-CMT-2D$_{2}$	Intermediate Bedrock	6	122.9	123.4	65.00	64.50		190.85
HA20-CMT-2D$_{3}$	Deep Bedrock	7	135.1	135.6	52.80	52.30		190.85
HA20-CMT-3S	Overburden (Ice Contact Deposits)	1	57.9	58.4	126.75	126.25		184.65
HA20-CMT-3I	Glacial Till	2	84.9	85.4	99.75	99.25		184.65
HA20-CMT-3D$_{1}$	Shallow Bedrock	3 and 6	101.9	102.4	82.75	82.25	181.64	184.65
HA20-CMT-3D$_{2}$	Intermediate Bedrock	4	113.9	114.4	70.75	70.25		184.65
HA20-CMT-3D$_{3}$	Intermediate Bedrock	5	123.9	124.4	60.75	60.25		184.65
HA20-CMT-3D$_{4}$	Deep Bedrock	7	142.9	143.4	41.75	41.25		184.65
HA20-CMT-4S	Overburden (Ice Contact Deposits)	1	61.9	62.4	114.96	114.46		176.86
HA20-CMT-4I	Glacial Till	2	78.9	79.4	97.96	97.46		176.86
HA20-CMT-4D$_{1}$	Shallow Bedrock	3 and 6	90.9	91.4	85.96	85.46	173.94	176.86
HA20-CMT-4D$_{2}$	Intermediate Bedrock	4	102.9	103.4	73.96	73.46		176.86
HA20-CMT-4D$_{3}$	Deep Bedrock	5 and 7	110.9	111.4	65.96	65.46		176.86
HA20-CMT-5S	Overburden (Ice Contact Deposits)	1	44.9	45.4	131.74	131.24		176.64
HA20-CMT-5I	Overburden (Ice Contact Deposits)	2	64.9	65.4	111.74	111.24		176.64
HA20-CMT-5I$_{2}$	Glacial Till	3	72.9	73.4	103.74	103.24		176.64
HA20-CMT-5D$_{1}$	Shallow Bedrock	4	81.9	82.4	94.74	94.24	173.45	176.64
HA20-CMT-5D$_{2}$	Intermediate Bedrock	5	91.9	92.4	84.74	84.24		176.64
HA20-CMT-5D$_{3}$	Intermediate Bedrock	6	116.9	117.4	59.74	59.24		176.64
HA20-CMT-5D$_{4}$	Deep Bedrock	7	129.1	129.6	47.54	47.04		176.64
HA20-CMT-6S	Overburden (Ice Contact Deposits)	2	65	65.5	115.45	114.95		180.45
HA20-CMT-6I	Shallow Bedrock	4 and 1	77	77.5	103.45	102.95		180.45
HA20-CMT-6D$_{1}$	Shallow Bedrock	3	83	83.5	97.45	96.95		180.45
HA20-CMT-6D$_{2}$	Intermediate Bedrock	5	99.5	100	80.95	80.45	177.34	180.45
HA20-CMT-6D$_{3}$	Intermediate Bedrock	6	118	118.5	62.45	61.95		180.45
HA20-CMT-6D$_{4}$	Deep Bedrock	7	126	126.5	54.45	53.95		180.45

NOTES:
1. FT: Feet
2. BGS: Ground Surface
3. CMT: Continuous Multichannel Tubing
4. OW: Observation Well

TABLE HB1-2
SUMMARY OF GROUNDWATER ELEVATION DATA - CMTS AND OWS
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Well ID	Formation	Total Depth/ CMT Number	Date of DTW Measurement	Total Depth/ CMT Number	DTW (ft)	Reference Elevation (ft NGVD 1929)	Groundwater Elevation
HA20-CMT-3B(OW)	Bedrock	108	3/31/2021	108	46.8	184.3	137.5
HA20-CMT-3T(OW)	Glacial Till	92		92	48.31	184.79	136.48
HA20-CMT-5(OW)	Bedrock	100		100	32.12	175.64	143.52
HA20-CMT-6(OW)	Bedrock	84		84	36.26	180.29	144.03
HA20-CMT-1S	Overburden (Ice Contact Deposits)	1 and 4	3/31/2021	1 and 4	37.24	180.13	142.89
HA20-CMT-1I	Glacial Till	2		2	37.24		142.89
HA20-CMT-1D_1	Shallow Bedrock	3 and 6		3 and 6	37.20		142.93
HA20-CMT-1D_2	Intermediate Bedrock	5		5	35.73		144.40
HA20-CMT-1D_3	Deep Bedrock	7		7	35.84		144.29
HA20-CMT-2S	Overburden (Ice Contact Deposits)	4 and 1	3/31/2021	4 and 1	51.41	190.85	139.44
HA20-CMT-2I	Shallow Bedrock	5 and 2		5 and 2	52.88		137.97
HA20-CMT-2D_1	Shallow Bedrock	3		3	52.84		138.01
HA20-CMT-2D_2	Intermediate Bedrock	6		6	49.49		141.36
HA20-CMT-2D_3	Deep Bedrock	7		7	49.39		141.46
HA20-CMT-3S	Overburden (Ice Contact Deposits)	1	3/31/2021	1	47.89	184.65	136.76
HA20-CMT-3I	Glacial Till	2		2	46.43		138.22
HA20-CMT-3D_1	Shallow Bedrock	3 and 6		3 and 6	46.14		138.51
HA20-CMT-3D_2	Intermediate Bedrock	4		4	46.16		138.49
HA20-CMT-3D_3	Intermediate Bedrock	5		5	47.16		137.49
HA20-CMT-3D_4	Deep Bedrock	7		7	46.57		138.08
HA20-CMT-4S	Overburden (Ice Contact Deposits)	1	3/31/2021	1	37.01	176.86	139.85
HA20-CMT-4I	Glacial Till	2		2	36.92		139.94
HA20-CMT-4D_1	Shallow Bedrock	3 and 6		3 and 6	36.01		140.85
HA20-CMT-4D_2	Intermediate Bedrock	4		4	34.93		141.93
HA20-CMT-4D_3	Deep Bedrock	5 and 7		5 and 7	37.21		139.65
HA20-CMT-5S	Overburden (Ice Contact Deposits)	1	3/31/2021	1	47.85	176.64	128.79
HA20-CMT-5I	Overburden (Ice Contact Deposits)	2		2	34.39		142.25
HA20-CMT-5I_2	Glacial Till	3		3	34.39		142.25
HA20-CMT-5D_1	Shallow Bedrock	4		4	34.34		142.30
HA20-CMT-5D_2	Intermediate Bedrock	5		5	33.00		143.64
HA20-CMT-5D_3	Intermediate Bedrock	6		6	31.93		144.71
HA20-CMT-5D_4	Deep Bedrock	7		7	-		-
HA20-CMT-6S	Overburden (Ice Contact Deposits)	2	3/31/2021	2	37.8	180.45	142.65
HA20-CMT-6I	Shallow Bedrock	4 and 1		4 and 1	37.61		142.84
HA20-CMT-6D_1	Shallow Bedrock	3		3	36.39		144.06
HA20-CMT-6D_2	Intermediate Bedrock	5		5	36.01		144.44
HA20-CMT-6D_3	Intermediate Bedrock	6		6	36.08		144.37
HA20-CMT-6D_4	Deep Bedrock	7		7	-		-

NOTES:
1. DTW: Depth to water
2. FT: Feet
3. CMT: Continuous Multichannel Tubing
4. OW: Observation Well

TABLE HB1-3
SUMMARY OF GEOTECHNICAL DATA OF ROCK TESTING RESULTS
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

					Compressive Strength of Rock (ASTM 7012 Method C)			Abrasiveness of Rock CERCHAR Method (ASTM D7625)			
Boring ID	**Core ID**	**Cored Interval (ft -BGS)**	**Core Description**	**RQD (%)**	**Analyzed Sample Interval (ft)**	**Bulk Density (pcf)**	**Compressive Strength (psi)**	**Analyzed Sample Interval (ft)**	**CAIs**	**CAI***	**CAI Classification**
HA20-CMT-1	C1	77.2 - 78.0	Very hard, fresh grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive	78%	Not submitted for analysis			77.29 - 77.39	3.78	4.22	Extreme
	C2	80.5 - 81.6	Very hard fresh, dark grey, medium to fine grained ASSSABET QUARTZ DIORITE, massive	95%	80.68 - 81.36	180	2878	Not submitted for analysis			
	C4	89.7 - 90.8	Very hard fresh, dark grey, medium to fine grained ASSSABET QUARTZ DIORITE, massive	93%	89.90 - 90.59	176	11015	Not submitted for analysis			
HA20-CMT-2	C1	90.5 - 92.3	Very hard fresh light to dark grey, very coarse to medium grained ASSSABET QUARTZ DIORITE, massive	100%	90.60 - 91.27	166	5963	91.28 - 91.38	2.26	2.72	High
	C2	94.3 - 96.0	Very hard fresh light to dark grey, very coarse to medium grained ASSSABET QUARTZ DIORITE, massive	83%	94.46 - 95.14	176	19665	94.15 - 94.25	4.09	4.53	Extreme
	C4	102.6 - 104.0	Very hard fresh light to dark grey, very coarse to medium grainedASSSABET QUARTZ DIORITE, massive	92%	103.31 - 103.95	167	27317	Not Tested			
HA20-CMT-4	C1	93.2 - 94.9	Very hard, fresh grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive	97%	93.34 - 94.03	168	31073	94.04 - 94.14	3.98	4.42	Extreme
	C2	98.5 - 99.6	Very hard fresh, dark grey, medium to fine grained ASSSABET QUARTZ DIORITE, massive	90%	98.61 - 99.26	172	20892	Not submitted for analysis			
	C3	103.0 - 104.2	Very hard fresh, dark grey, medium to fine grained ASSSABET QUARTZ DIORITE, massive	93%	103.17 - 103.87	172	17011	Not submitted for analysis			
HA20-CMT-5	C1	81.9 - 83.5	Very hard, fresh dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive	92%	82.31 - 82.99	177	23759	83.00 - 83.10	3.82	4.26	Extreme
	C2	87.4 - 88.3	Very hard, fresh dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive	100%	87.50 - 88.19	178	25750	Not submitted for analysis			
	C3	90.0 - 90.9	Very hard, fresh dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive	93%	90.09 - 90.76	178	27932	Not submitted for analysis			
HA20-GP-102A	C2	98.5 - 99.5	Very hard fresh light to dark grey, very coarse to medium grained ASSSABET QUARTZ DIORITE, massive	98%	98.59 - 99.26	181	24272	99.27 - 99.37	3.81	4.25	Extreme
	C3	101.5 - 102.6	Very hard fresh light to dark grey, very coarse to medium grained ASSSABET QUARTZ DIORITE, massive	96%	101.71 - 102.39	179	21260	Not submitted for analysis			
	C4	108.7 - 109.7	Very hard fresh light to dark grey, very coarse to medium grained ASSSABET QUARTZ DIORITE, massive	93%	108.83 - 109.47	162	10898	109.48 - 109.58	3.52	3.96	High
HA20-GP-105	C1	110.4 - 111.8	Very hard, fresh, grey with pockets of dark grey medium to coarse grained ACTON GRANITE, massive	73%	110.51 - 111.20	161	11492	111.21 - 111.31	3.85	4.29	Extreme

Abbreviations and Units:
PDI = Potential Degradation Index
ft = feet
BGS = Below Ground Surface
RQD = Rock Quality Designation
pcf = pounds per cubic foot
psi = pound per square inch
CAI = CERCHAR Abrasiveness Index
CAIs = CERCHAR Abrasiveness Index for smooth (saw cut) surface
CAI* = CERCHAR Abrasiveness Index for natural surface

Notes:

1. The full core descriptions can be found in the boring logs for HA20-CMT-1, HA20-CMT-2, HA20-CMT-4, HA20-CMT-5, HA20-GP-102A and HA20-GP-105. These borings were drilled in October 2020 through January 2021 by Haley & Aldrich as a part of the field exploration program in support of the Remedial Design for the Nuclear Metals, Inc. site.
2. The analytical testing was performed by GeoTesting Express of Acton, Massachusetts.
3. During the uncompressive strength testing, the axial load was applied continuously at a stress rate that produced failure in a test time between 2 and 15 minutes.
4. The CERCHAR test is run on a saw cut surface of the core sample using a stylus with a hardness of 54/56 HRC
5. The correlation between CAIs and CAI* is as shown below:
   CAI* = (0.99 × CAIs) + 0.48
6. CAI Classification is as follows:
   - Very low abrasiveness 0.30–0.50
   - Low abrasiveness 0.50–1.00
   - Medium abrasiveness 1.00–2.00
   - High abrasiveness 2.00–4.00
   - Extreme abrasiveness 4.00–6.00
   - Quartzitic 6.0–7.0 N/A

TABLE HB1-4
SUMMARY OF GROUNDWATER QUALITY DATA
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Location Name	Overburden ROD Cleanup Level	Bedrock ROD Cleanup Level	HA20-CMT-101	HA20-CMT-1D1	HA20-CMT-1D1	HA20-CMT-1D2	HA20-CMT-1I	HA20-CMT-1S	HA20-CMT-2D1	HA20-CMT-2D2	HA20-CMT-2D3	HA20-CMT-2I	HA20-CMT-2S
Sample Name			HA20-CMT-101-09172021	HA20-CMT-1D1-04072021	HA20-CMT-1D1-07162021	HA20-CMT-1D2-07162021	HA20-CMT-1I-04072021	HA20-CMT-1S-04072021	HA20-CMT-2D1-04152021	HA20-CMT-2D2-07192021	HA20-CMT-2D3-07192021	HA20-CMT-2I-04092021	HA20-CMT-2S-04082021
Sample Date			09/17/2021	04/07/2021	07/16/2021	07/16/2021	04/07/2021	04/07/2021	04/15/2021	07/19/2021	07/19/2021	04/09/2021	04/08/2021
Lab Sample ID			L2150411-01	540452019 540452020 L2117504-24	550420009 550420010 L2138330-02	550420011 550420012 L2138330-03	540451019 540451020 L2117504-13	540451007 540451008 L2117504-07	541203007 541203008 L2119379-09	550420013 550420014 L2138589-01	550420015 550420016 L2138589-02	541034007 541034008 L2118225-06	540450017 540450018 L2117869-27
Volatile Organic Compounds (ug/L)													
1,1-Dichloroethane	NA	2.7	-	1 U	1 U	-	1 U	1 U	1 U	-	-	1 U	1 U
1,1-Dichloroethene	NA	NA	-	1 U	1 U	-	1 U	1 U	1 U	-	-	1 U	1 U
1,2,4-Trimethylbenzene	NA	NA	-	2 U	2 U	-	2 U	2 U	2 U	-	-	2 U	1.3 J
1,2-Dichloroethene (total)	NA	NA	-	1 U	1 U	-	1 U	1 U	0.2 J	-	-	1 U	1 U
1,3,5-Trimethylbenzene	NA	NA	-	2 U	2 U	-	2 U	2 U	2 U	-	-	2 U	0.26 J
1,4-Dioxane	0.46	0.46	-	-	250 U	-	-	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	NA	NA	-	2.3 J	5 U	-	5 U	5 U	5 U	-	-	2 J	5 U
2-Hexanone	NA	NA	-	1.8 J	5 U	-	5 UJ	5 UJ	5 U	-	-	5 U	5 U
Acetone	NA	NA	-	10	3 J	-	5 U	5 U	3.7 J	-	-	12	8.3
Benzene	NA	NA	-	0.4 J	0.18 J	-	0.5 U	0.5 U	0.5 U	-	-	0.5 U	0.44 J
Bromodichloromethane	NA	NA	-	1 U	1 U	-	1 U	1 U	1 U	-	-	1 U	1 U
Bromomethane (Methyl Bromide)	NA	NA	-	2 UJ	2 U	-	2 UJ	2 UJ	2 U	-	-	2 U	2 U
Carbon disulfide	NA	NA	-	0.37 J	2 U	-	2 U	2 U	2 U	-	-	2 U	2 U
Chloroform (Trichloromethane)	NA	NA	-	1 U	1 U	-	0.33 J	1 J+	0.75 J	-	-	0.28 J	1 U
Chloromethane (Methyl Chloride)	NA	NA	-	2 U	2 U	-	2 U	2 U	2 U	-	-	0.33 J	2 U
cis-1,2-Dichloroethene	NA	NA	-	1 U	1 U	-	1 U	1 U	0.2 J	-	-	1 U	1 U
Dibromochloromethane	NA	NA	-	1 U	1 U	-	1 U	1 U	1 U	-	-	1 U	1 U
Ethylbenzene	NA	NA	-	0.26 J	1 U	-	0.2 J	1 U	1 U	-	-	1 U	0.52 J
m,p-Xylenes	NA	NA	-	0.86 J	2 U	-	0.82 J	2 U	2 U	-	-	2 U	1.9 J
Methylene chloride (Dichloromethane)	NA	NA	-	0.73 J	2 U	-	2 U	2 U	2 U	-	-	0.84 J	2 U
n-Butylbenzene	NA	NA	-	2 U	2 U	-	2 U	2 U	2 U	-	-	2 U	2 U
o-Xylene	NA	NA	-	0.48 J	1 U	-	0.41 J	1 U	1 U	-	-	1 U	1.2
Tetrachloroethene	5	5	-	0.44 J	0.6 J	-	1 U	1 U	2	-	-	0.63 J	1 U
Toluene	NA	NA	-	1.8	0.62 J	-	1.5	1 U	1 U	-	-	0.54 J	3.7
Trichloroethene	5	5	-	1 U	1 U	-	1 U	1 U	0.94 J+	-	-	0.22 J	1 U
Xylene (total)	NA	NA	-	1.3 J	1 U	-	1.2 J	1 U	1 U	-	-	1 U	3.1 J
Semi-Volatile Organic Compounds (ug/L)													
bis(2-Chloroethyl)ether	NA	NA	-	2 UJ	2 U	-	2 UJ	2 U	2 UJ	-	-	2 UJ	2 UJ
bis(2-Ethylhexyl)phthalate	6	6	-	3 U	3 U	-	3 U	3 U	3 UJ	-	-	2.4 J	3 UJ
Diethyl phthalate	NA	NA	-	5 UJ	5 U	-	5 U	5 U	5 UJ	-	-	5 U	5 UJ
Phenol	NA	NA	-	5 UJ	5 U	-	5 UJ	5 UJ	5 UJ	-	-	1.3 J-	5 UJ
Semi-Volatile Organic Compounds (SIM) (ug/L)													
1,4-Dioxane	0.46	0.46	0.196	0.212	0.198	0.105 J	0.144 U	0.15 U	2.57	0.438	0.417	1.78	0.144 U
2-Methylnaphthalene	NA	NA	-	0.12 J-	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.18 J-	0.1 UJ
Acenaphthene	NA	NA	-	0.02 J	-	-	0.1 U	0.1 UJ	0.1 UJ	-	-	0.1 U	0.1 UJ
Acenaphthylene	NA	NA	-	0.33	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.22	0.1 UJ
Benzo(a)anthracene	NA	NA	-	0.1 U	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.04 J	0.1 UJ
Benzo(a)pyrene	NA	NA	-	0.1 U	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.02 J	0.1 UJ
Benzo(b)fluoranthene	NA	NA	-	0.02 J	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U	0.1 UJ
Benzo(g,h,i)perylene	NA	NA	-	0.1 U	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.03 J	0.1 UJ
Benzo(k)fluoranthene	NA	NA	-	0.1 U	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.01 J	0.1 UJ
Chrysene	NA	NA	-	0.1 U	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.03 J	0.1 UJ
Dibenz(a,h)anthracene	NA	NA	-	0.1 U	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U	0.1 UJ
Fluoranthene	NA	NA	-	0.06 J	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U	0.1 UJ
Fluorene	NA	NA	-	0.02 J	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U	0.1 UJ
Indeno(1,2,3-cd)pyrene	NA	NA	-	0.1 U	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.03 J	0.1 UJ
Naphthalene	NA	NA	-	0.22 J-	-	-	0.1 U	0.1 UJ	0.1 UJ	-	-	0.1 UJ	0.1 UJ
Phenanthrene	NA	NA	-	0.06 J	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U	0.1 UJ
Pyrene	NA	NA	-	0.14	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.09 J	0.1 UJ
Inorganic Compounds (ug/L)													
Aluminum, Dissolved	NA	NA	-	31.9 J	27.8 J	19.3 U	19.3 U	19.3 U	19.3 U	19.3 U	19.3 U	19.3 U	88.4
Antimony, Dissolved	NA	NA	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic, Dissolved	10	10	-	3.38 J	2.6 J	2 U	2 U	2 U	3.27 J	22.7	31.1	4.77 J	2 U
Barium, Dissolved	NA	2000	-	47.3	18.3	29.7	28.3	25.3	46.3	27.9	17.5	48.7	26.3
Beryllium, Dissolved	NA	NA	-	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium, Dissolved	NA	NA	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Calcium, Dissolved	NA	NA	-	45000	28700	55600	32600	26500	36700 J	45000	48700	61900	24200
Chromium, Dissolved	100	100	-	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Cobalt, Dissolved	6	6	-	0.793 J	0.3 U	0.973 J	0.638 J	0.411 J	0.889 J	0.413 J	0.53 J	0.524 J	12.9
Copper, Dissolved	1300	NA	-	0.3 U	0.3 U	0.3 U	0.464 J	0.588 J	0.329 J	0.3 U	0.3 U	0.3 U	0.451 J
Iron, Dissolved	14000	14000	-	588	488	667	33 U	33 U	156	146	389	735	544
Lead, Dissolved	NA	NA	-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Magnesium, Dissolved	NA	NA	-	7350	5110	11900	8650	6630	5720 J	11000	10400	10900	4260
Manganese, Dissolved	300	300	-	1430	691	700	53.6	10.3	1350	894	1510	1040	634
Molybdenum, Dissolved	100	100	-	118	46.2	3.51	0.705 J	0.276 J	43.1	8.6	11.9	52	35.9
Nickel, Dissolved	NA	NA	-	1.19 J	0.6 U	0.755 J	3.98	1.04 J	1.06 J	0.6 U	0.6 U	0.995 J	11.1

TABLE HB1-4
SUMMARY OF GROUNDWATER QUALITY DATA
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Location Name	Overburden ROD Cleanup Level	Bedrock ROD Cleanup Level	HA20-CMT-101	HA20-CMT-1D1	HA20-CMT-1D1	HA20-CMT-1D2	HA20-CMT-1I	HA20-CMT-1S	HA20-CMT-2D1	HA20-CMT-2D2	HA20-CMT-2D3	HA20-CMT-2I	HA20-CMT-2S
Sample Name			HA20-CMT-101-09172021	HA20-CMT-1D1-04072021	HA20-CMT-1D1-07162021	HA20-CMT-1D2-07162021	HA20-CMT-1I-04072021	HA20-CMT-1S-04072021	HA20-CMT-2D1-04152021	HA20-CMT-2D2-07192021	HA20-CMT-2D3-07192021	HA20-CMT-2I-04092021	HA20-CMT-2S-04082021
Sample Date			09/17/2021	04/07/2021	07/16/2021	07/16/2021	04/07/2021	04/07/2021	04/15/2021	07/19/2021	07/19/2021	04/09/2021	04/08/2021
				540452019	550420009	550420011	540451019	540451007	541203007	550420013	550420015	541034007	540450017
				540452020	550420010	550420012	540451020	540451008	541203008	550420014	550420016	541034008	540450018
Lab Sample ID			L2150411-01	L2117504-24	L2138330-02	L2138330-03	L2117504-13	L2117504-07	L2119379-09	L2138589-01	L2138589-02	L2118225-06	L2117869-27
Potassium, Dissolved	NA	NA	-	**14500**	**8710**	**8370**	**4650**	**3480**	**6580**	**4470**	**4550**	**10400**	**6370**
Selenium, Dissolved	NA	NA	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Silver, Dissolved	NA	NA	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Sodium, Dissolved	NA	NA	-	**369000**	**170000**	**20900**	**26100**	**28600**	**182000**	**23200**	**47500**	**366000**	**47400**
Thallium, Dissolved	NA	NA	-	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Thorium, Dissolved	0.33	0.33	-	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Uranium, Dissolved	30	30	-	**62.8**	**1.06**	**2.24**	0.067 U	**0.35 J**	**88.5**	**21.6**	**12.1**	**27.6**	**1.88**
Uranium-235, Dissolved	30	30	-	**0.129**	0.01 U	**0.0147 J**	0.01 U	0.01 U	**0.644**	**0.151**	**0.0845**	**0.191**	0.01 U
Uranium-238, Dissolved	30	30	-	**62.7**	**1.06**	**2.23**	0.067 U	**0.35 J**	**87.8**	**21.5**	**12.1**	**27.4**	**1.88**
Vanadium, Dissolved	NA	NA	-	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
Zinc, Dissolved	NA	NA	-	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
Inorganic Compounds (ug/L)													
Aluminum, Total	NA	NA	-	**253**	**35.5 J**	**46 J**	19.3 U	19.3 U	**42.5 J**	19.3 U	19.3 U	19.3 U	**294**
Antimony, Total	NA	NA	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic, Total	10	10	-	**3.5 J**	**2.74 J**	2 U	2 U	2 U	**3.3 J**	**23.3**	**32.7**	**4.71 J**	**2.07 J**
Barium, Total	NA	2000	-	**50.2**	**19**	**29.8**	**27.8**	**25.7**	**40**	**30**	**17.8**	**48**	**27.3**
Beryllium, Total	NA	NA	-	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium, Total	NA	NA	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Calcium, Total	NA	NA	-	**48200**	**29000**	**55200**	**32400**	**27000**	**32400 J**	**46100**	**47500**	**56400**	**24000**
Chromium, Total	100	100	-	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Cobalt, Total	6	6	-	**0.969 J**	0.3 U	**1.03**	**0.618 J**	**0.425 J**	**0.855 J**	**0.453 J**	**0.553 J**	**0.522 J**	**13.3**
Copper, Total	1300	NA	-	**0.958 J**	0.3 U	**0.427 J**	0.3 UJ	0.3 UJ	0.3 UJ	**0.373 J**	**0.361 J**	0.3 U	**1.31 J**
Iron, Total	14000	14000	-	**1000**	**578**	**737**	33 U	33 U	**194**	**169**	**440**	**849**	**780**
Lead, Total	NA	NA	-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Magnesium, Total	NA	NA	-	**7780**	**5120**	**12000**	**8700**	**6690**	**5000 J**	**11000**	**11000**	**10400**	**4290**
Manganese, Total	300	300	-	**1580**	**704**	**701**	**52.6**	**10.6**	**1260**	**949**	**1600**	**981**	**654**
Molybdenum, Total	100	100	-	**123**	**47.6**	**3.55**	**0.656 J**	**0.25 J**	**41.7**	**9.75**	**12.8**	**51.2**	**36.8**
Nickel, Total	NA	NA	-	**1.61 J**	0.6 U	**0.799 J**	**3.7**	**1.16 J**	**0.755 J**	0.6 U	0.6 U	**0.772 J**	**11.3**
Potassium, Total	NA	NA	-	**15100**	**8770**	**8370**	**4600**	**3500**	**6050**	**4600**	**4750**	**10400**	**6410**
Selenium, Total	NA	NA	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Silver, Total	NA	NA	-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Sodium, Total	NA	NA	-	**387000**	**174000**	**20700**	**25900**	**28900**	**169000**	**23700**	**48700**	**332000**	**48200**
Thallium, Total	NA	NA	-	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Thorium, Total	0.33	0.33	-	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Uranium, Total	30	30	-	**77.3**	**1.1**	**2.2**	0.067 U	**0.0954 J**	**84.7**	**21.8**	**12.7**	**26.5**	**1.69**
Uranium-235, Total	30	30	-	**0.163**	0.01 U	**0.0151 J**	0.01 U	0.01 U	**0.622**	**0.147**	**0.0935**	**0.187**	0.01 U
Uranium-238, Total	30	30	-	**77.1**	**1.1**	**2.19**	0.067 U	**0.0954 J**	**84.1**	**21.6**	**12.6**	**26.3**	**1.69**
Vanadium, Total	NA	NA	-	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
Zinc, Total	NA	NA	-	3.3 U	3.3 U	**5.91 J**	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
Other													
Dissolved Organic Carbon (DOC) (mg/L)	NA	NA	**12**	**46 J**	**21**	**0.7 J**	**0.42 J**	**0.54 J**	**22 J**	**1.3**	**6.7**	**50 J**	**5.9 J**
Alkalinity, Bicarbonate (as CaCO3), Total (mg/L)	NA	NA	**132**	**162**	**151**	**73.4**	**28.6**	**18.3**	**127**	**89.8**	**100**	**195**	**69.4**
Carbonate, Total (mg/L)	NA	NA	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloride, Total (mg/L)	NA	NA	**86.8**	**130**	**90.1**	**96.4**	**82.6**	**81.3**	**52.5 J-**	**56**	**56.2**	**89.6 J-**	**70.2**
Fluoride, Total (mg/L)	NA	NA	**0.52**	**0.534**	**0.613**	**0.054**	**0.038 J**	**0.048 J**	**0.482 J-**	**0.195**	**0.118**	**0.408**	**0.181 J-**
Nitrate (as N), Total (mg/L)	10	10	**0.023 J**	0.1 U	0.1 U	**1**	**3.9 J+**	**3.1 J+**	0.1 U	0.1 U	0.1 U	0.1 UJ	**0.89 J+**
Nitrite (as N), Total (mg/L)	1	1	0.05 U	0.05 U	0.05 U	**0.087**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Orthophosphate, Total (mg/L)	NA	NA	-	**0.015**	**0.052**	-	**0.001 J**	**0.001 J**	**0.052**	-	-	**0.066**	0.005 UJ
Phosphorus, Total (mg/L)	NA	NA	-	**0.059**	**0.124**	-	**0.004 J**	0.01 U	**0.095 J**	-	-	**0.078**	**0.029**
Sulfate, Total (mg/L)	NA	NA	**124**	**609 J-**	**232**	**37.8**	**21.4 J-**	**16 J-**	**239 J-**	**51.1**	**115**	**692**	**27.9 J-**

ABBREVIATIONS AND NOTES:
mg/L: milligrams per liter
NA: Not Applicable
ug/L: micrograms per liter
-: Not Analyzed

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Bold values indicate a detection above the reporting limit.
- Shaded values indicate an exceedance of the Overburden or Bedrock ROD Cleanup Level.
- Bedrock and Overburden ROD Cleanup Levels are from Table L-1 - Groundwater Cleanup Levels, as listed in the Record of Decision (ROD).

TABLE HB1-4
SUMMARY OF GROUNDWATER QUALITY DATA
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Location Name	Overburden ROD Cleanup Level	Bedrock ROD Cleanup Level	HA20-CMT-3B(OW)	HA20-CMT-3D2	HA20-CMT-3D3	HA20-CMT-3D4	HA20-CMT-3I	HA20-CMT-3S	HA20-CMT-3T(OW)	HA20-CMT-3T(OW)	HA20-CMT-3T(OW)	HA20-CMT-4D1
Sample Name			HA20-CMT-3B(OW)-04052021	HA20-CMT-3D2-04122021	HA20-CMT-3D3-07192021	HA20-CMT-3D4-07202021	HA20-CMT-3I-04122021	HA20-CMT-3S-04092021	HA20-CMT3T(OW)-04052021	HA20-CMT-3T(OW)-07202021	HA20-CMT-3T(OW)-07202021 DUP	HA20-CMT-4D1-04132021
Sample Date			04/05/2021	04/12/2021	07/19/2021	07/20/2021	04/12/2021	04/09/2021	04/05/2021	07/20/2021	07/20/2021	04/13/2021
			540069007	541038001	550420017	550420019	541037007	541036003	540204001	550420021	550420023	541201007
			540069008	541038002	550420018	550420020	541037008	541036004	540204002	550420022	550420024	541201008
Lab Sample ID			L2116995-04	L2118447-12	L2138589-03	L2138779-01	L2118447-04	L2118225-25	L2117259-01	L2138779-02	L2138779-03	L2118722-04
Volatile Organic Compounds (ug/L)												
1,1-Dichloroethane	NA	2.7	1 U	1 U	-	-	1 U	1 U	**1**	**1.2**	**1.1**	1 U
1,1-Dichloroethene	NA	NA	**0.18 J**	**0.37 J**	-	-	**0.17 J**	1 U	**4.7**	**5.2**	**5.3**	1 U
1,2,4-Trimethylbenzene	NA	NA	2 U	2 U	-	-	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethene (total)	NA	NA	**0.37 J**	**0.34 J**	-	-	**0.32 J**	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	NA	NA	2 U	2 U	-	-	2 U	2 U	2 U	2 U	2 U	2 UJ
1,4-Dioxane	0.46	0.46	-	-	-	-	-	-	-	250 U	**75 J**	-
2-Butanone (Methyl Ethyl Ketone)	NA	NA	5 U	5 U	-	-	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	NA	NA	5 U	5 U	-	-	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	NA	NA	5 U	**2.2 J**	-	-	5 U	5 U	5 U	**1.7 J**	5 U	5 U
Benzene	NA	NA	**0.44 J**	**0.22 J**	-	-	**0.86**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	NA	NA	1 U	1 U	-	-	1 U	1 U	1 U	**0.25 J**	**0.28 J**	1 U
Bromomethane (Methyl Bromide)	NA	NA	2 U	2 U	-	-	2 U	2 U	2 U	**0.4 J**	**0.35 J**	2 U
Carbon disulfide	NA	NA	2 U	2 U	-	-	2 U	2 U	2 U	2 U	2 U	2 U
Chloroform (Trichloromethane)	NA	NA	1 U	**7**	-	-	1 U	**0.97 J**	**2.4**	**2.6**	**2.5**	**0.38 J**
Chloromethane (Methyl Chloride)	NA	NA	2 U	2 U	-	-	**0.36 J**	2 U	2 U	**0.29 J**	**0.31 J**	2 U
cis-1,2-Dichloroethene	NA	NA	**0.37 J**	**0.34 J**	-	-	**0.32 J**	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	NA	NA	1 U	1 U	-	-	1 U	1 U	1 U	1 U	**0.16 J**	1 U
Ethylbenzene	NA	NA	1 U	1 U	-	-	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylenes	NA	NA	2 U	2 U	-	-	**0.33 J**	2 U	2 U	2 U	2 U	**0.58 J+**
Methylene chloride (Dichloromethane)	NA	NA	2 U	2 U	-	-	2 U	2 U	2 U	2 U	2 U	2 U
n-Butylbenzene	NA	NA	2 U	**0.27 J**	-	-	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	NA	NA	1 U	1 U	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	**0.83 J**	**0.64 J**	-	-	**0.69 J**	1 U	**1.1**	**0.92 J**	**0.97 J**	1 U
Toluene	NA	NA	1 U	**0.28 J**	-	-	**0.57 J**	1 U	1 U	1 U	1 U	**0.76 J**
Trichloroethene	5	5	**1.1**	**0.88 J**	-	-	**0.52 J**	1 U	**5.8**	**5.9**	**5.9**	1 U
Xylene (total)	NA	NA	1 U	1 U	-	-	**0.33 J**	1 U	1 U	1 U	1 U	**0.58 J**
Semi-Volatile Organic Compounds (ug/L)												
bis(2-Chloroethyl)ether	NA	NA	2 UJ	2 UJ	-	-	2 UJ	2 UJ	2 UJ	2 U	2 U	2 UJ
bis(2-Ethylhexyl)phthalate	6	6	3 UJ	3 U	-	-	3 U	3 U	3 UJ	3 U	3 U	**1.7 J**
Diethyl phthalate	NA	NA	5 UJ	5 UJ	-	-	5 UJ	**1.6 J**	5 UJ	5 U	5 U	5 UJ
Phenol	NA	NA	5 UJ	5 UJ	-	-	5 UJ	5 UJ	5 UJ	5 U	5 U	5 UJ
Semi-Volatile Organic Compounds (SIM) (ug/L)												
1,4-Dioxane	0.46	0.46	**2.53**	**3.13**	**13.2**	**2.93**	**3.33**	**0.529**	**43.7**	**40.8**	**41**	**0.309**
2-Methylnaphthalene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 UJ	0.1 U	0.1 UJ	-	-	**0.12 J**
Acenaphthene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 UJ	0.1 UJ	0.1 UJ	-	-	**0.03 J**
Acenaphthylene	NA	NA	0.1 UJ	0.1 UJ	-	-	**0.02 J-**	0.1 UJ	0.1 UJ	-	-	0.1 U
Benzo(a)anthracene	NA	NA	**0.02 J-**	0.1 UJ	-	-	0.1 UJ	0.1 U	0.1 UJ	-	-	0.1 U
Benzo(a)pyrene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U
Benzo(b)fluoranthene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 UJ	0.1 U	0.1 UJ	-	-	0.1 U
Benzo(g,h,i)perylene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U
Benzo(k)fluoranthene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U
Chrysene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 UJ	0.1 U	0.1 UJ	-	-	0.1 U
Dibenz(a,h)anthracene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U
Fluoranthene	NA	NA	**0.02 J-**	0.1 UJ	-	-	0.1 U	0.1 UJ	0.1 UJ	-	-	0.1 U
Fluorene	NA	NA	**0.02 J-**	0.1 UJ	-	-	0.1 UJ	0.1 UJ	0.1 UJ	-	-	**0.05 J**
Indeno(1,2,3-cd)pyrene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 U	0.1 UJ	0.1 UJ	-	-	0.1 U
Naphthalene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 UJ	0.1 U	0.1 UJ	-	-	**0.11 J-**
Phenanthrene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 UJ	0.1 UJ	0.1 UJ	-	-	**0.11**
Pyrene	NA	NA	0.1 UJ	0.1 UJ	-	-	0.1 U	0.1 U	0.1 UJ	-	-	0.1 U
Inorganic Compounds (ug/L)												
Aluminum, Dissolved	NA	NA	**21.4 J**	**22.1 J**	**67.9**	**30 J**	**200**	19.3 U	**839 J**	**45.9 J**	**49.1 J**	**26.1 J**
Antimony, Dissolved	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic, Dissolved	10	10	**27**	**7.81**	**5.45**	**4.11 J**	**7.16**	**2.96 J**	2 U	2 U	2 U	**2.01 J**
Barium, Dissolved	NA	2000	**16.4**	**44.8**	**26.9**	**14**	**7.1**	**24**	**245 J**	**172**	**174**	**12.9**
Beryllium, Dissolved	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium, Dissolved	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Calcium, Dissolved	NA	NA	**33700**	**61200**	**165000**	**25300**	**17900**	**26100**	**210000**	**178000**	**178000**	**43400**
Chromium, Dissolved	100	100	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Cobalt, Dissolved	6	6	**0.451 J**	**1.26**	**1.41**	0.3 U	0.3 U	**0.513 J**	**1.13 J**	**0.431 J**	**0.446 J**	0.3 U
Copper, Dissolved	1300	NA	0.3 U	0.3 U	**1.11 J**	**0.332 J**	0.3 U	**0.516 J**	**2.89 J**	**1.4 J**	**1.25 J**	0.3 U
Iron, Dissolved	14000	14000	**35.8 J**	**925**	**1510**	**170**	33 U	**97.2 J**	**1130 J**	**91.3 J**	**92.3 J**	33 U
Lead, Dissolved	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.69 J**	0.5 U	0.5 U	0.5 U
Magnesium, Dissolved	NA	NA	**9130**	**8430**	**36900**	**5770**	**1960**	**4130**	**59500**	**48900**	**49800**	**10100**
Manganese, Dissolved	300	300	**383**	**2360**	**3900**	**475**	**128**	**802**	**1380**	**1100**	**1120**	**222**
Molybdenum, Dissolved	100	100	**89.3**	**280**	**19.7**	**276**	**227**	**62.5**	**16.3**	**18.2 J**	**18.1 J**	**4.43 J**
Nickel, Dissolved	NA	NA	**1.16 J**	**1.16 J**	**1.18 J**	0.6 U	**1.06 J**	0.6 U	**1.77 J**	**1.55 J**	**1.56 J**	0.6 U

TABLE HB1-4
SUMMARY OF GROUNDWATER QUALITY DATA
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Location Name	Overburden ROD Cleanup Level	Bedrock ROD Cleanup Level	HA20-CMT-3B(OW)	HA20-CMT-3D2	HA20-CMT-3D3	HA20-CMT-3D4	HA20-CMT-3I	HA20-CMT-3S	HA20-CMT-3T(OW)	HA20-CMT-3T(OW)	HA20-CMT-3T(OW)	HA20-CMT-4D1
Sample Name			HA20-CMT-3B(OW)-04052021	HA20-CMT-3D2-04122021	HA20-CMT-3D3-07192021	HA20-CMT-3D4-07202021	HA20-CMT-3I-04122021	HA20-CMT-3S-04092021	HA20-CMT3T(OW)-04052021	HA20-CMT-3T(OW)-07202021	HA20-CMT-3T(OW)-07202021 DUP	HA20-CMT-4D1-04132021
Sample Date			04/05/2021	04/12/2021	07/19/2021	07/20/2021	04/12/2021	04/09/2021	04/05/2021	07/20/2021	07/20/2021	04/13/2021
			540069007	541038001	550420017	550420019	541037007	541036003	540204001	550420021	550420023	541201007
			540069008	541038002	550420018	550420020	541037008	541036004	540204002	550420022	550420024	541201008
Lab Sample ID			L2116995-04	L2118447-12	L2138589-03	L2138779-01	L2118447-04	L2118225-25	L2117259-01	L2138779-02	L2138779-03	L2118722-04
Potassium, Dissolved	NA	NA	**5180**	**6400**	**8970**	**5320**	**4520**	**5400**	**18200**	**19400**	**19300**	**4380**
Selenium, Dissolved	NA	NA	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Silver, Dissolved	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Sodium, Dissolved	NA	NA	**63000**	**437000 J**	**412000**	**98200**	**185000**	**67900**	**111000**	**96500**	**95300**	**16300**
Thallium, Dissolved	NA	NA	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Thorium, Dissolved	0.33	0.33	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	**0.807 J**	0.7 U	0.7 U	0.7 U
Uranium, Dissolved	30	30	**45.4**	**86.1**	**77.4 J**	**10.4 J**	**2.58**	**54**	**4.52**	**4.72**	**4.6**	**11**
Uranium-235, Dissolved	30	30	**0.332**	**0.623**	**0.554 J**	**0.0751 J**	0.01 U	**0.129**	**0.0304 J**	**0.0297 J**	**0.0299 J**	**0.0793**
Uranium-238, Dissolved	30	30	**45.1**	**85.5**	**76.9**	**10.4 J**	**2.58**	**53.9**	**4.49**	**4.69**	**4.57**	**10.9**
Vanadium, Dissolved	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	**4.64 J**
Zinc, Dissolved	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	**5.81 J**	3.3 U	**13.2 J**	**14.1 J**	3.3 U
Inorganic Compounds (ug/L)												
Aluminum, Total	NA	NA	**181**	**41.8 J**	**206**	**100**	**230**	**45.4 J**	**23.1 J**	**293**	**223**	**70.2**
Antimony, Total	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic, Total	10	10	**27.6**	**8.3**	**5.91**	**4.54 J**	**7.34**	**3.25 J**	2 U	2 U	2 U	2 UJ
Barium, Total	NA	2000	**17.4**	**42.3 J**	**26.6**	**14**	**7.84**	**25**	**216 J**	**178**	**177**	**13.2**
Beryllium, Total	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium, Total	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Calcium, Total	NA	NA	**34200**	**58400**	**155000**	**24800**	**18500**	**26600**	**210000**	**170000**	**178000**	**42900**
Chromium, Total	100	100	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Cobalt, Total	6	6	**0.598 J**	**1.23 J**	**1.82**	**0.349 J**	0.3 U	**0.55 J**	**0.464 J**	**0.753 J**	**0.641 J**	0.3 U
Copper, Total	1300	NA	**0.969 J**	**0.976 J**	**3.85**	**0.621 J**	0.3 U	**0.862 J**	0.3 UJ	**2.43**	**2.22**	**0.527 J**
Iron, Total	14000	14000	**242**	**999 J**	**1970**	**422**	**74.2 J**	**158**	33 UJ	**508**	**388**	**201**
Lead, Total	NA	NA	0.5 U	0.5 U	**0.868 J**	0.5 U	0.5 U	0.5 U	0.5 UJ	**0.876 J**	**0.629 J**	0.5 U
Magnesium, Total	NA	NA	**9360**	**8090**	**34900**	**5620**	**2060**	**4260**	**58800**	**45900**	**49500**	**10100**
Manganese, Total	300	300	**399**	**2280 J**	**4090**	**482**	**139**	**812**	**1350**	**1120**	**1100**	**227**
Molybdenum, Total	100	100	**90.2**	**293**	**19.7**	**279**	**234**	**64.2**	**21.6**	**16.1 J**	**16.2 J**	**3.24 J**
Nickel, Total	NA	NA	**1.14 J**	**1.04 J**	**1.64 J**	**0.632 J**	0.6 UJ	0.6 U	**0.879 J**	**1.7 J**	**1.86 J**	0.6 U
Potassium, Total	NA	NA	**5360**	**6280**	**8770**	**5260**	**4670**	**5600**	**18000**	**19000**	**19600**	**4320**
Selenium, Total	NA	NA	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Silver, Total	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Sodium, Total	NA	NA	**66400**	**424000 J**	**414000**	**99100**	**186000**	**70400**	**112000**	**93100**	**95000**	**16100**
Thallium, Total	NA	NA	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Thorium, Total	0.33	0.33	0.7 U	**0.72 J**	0.7 U	0.7 U	0.7 U	0.7 U	0.7 UJ	0.7 U	0.7 U	0.7 U
Uranium, Total	30	30	**45.9**	**79.6 J**	**71 J**	**9.25 J**	**2.55**	**58.6**	**4.11**	**4.3**	**4.73**	**11**
Uranium-235, Total	30	30	**0.332**	**0.58**	**0.494 J**	**0.0646 J**	0.01 U	**0.139**	**0.0292 J**	**0.0261 J**	**0.0341 J**	**0.074**
Uranium-238, Total	30	30	**45.6**	**79 J**	**70.5**	**9.19 J**	**2.55**	**58.5**	**4.08**	**4.27**	**4.69**	**11**
Vanadium, Total	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	**3.35 J**	**5.02 J**
Zinc, Total	NA	NA	3.3 U	**5.47 J**	**5.47 J**	3.3 U	3.3 U	3.3 UJ	**3.49 J**	**14.9 J**	**15.2 J**	**5.44 J**
Other												
Dissolved Organic Carbon (DOC) (mg/L)	NA	NA	**3.4 J**	**86 J**	**82**	**11**	**28 J**	**10 J**	**1.9 J**	**2**	**2.1**	-
Alkalinity, Bicarbonate (as CaCO3), Total (mg/L)	NA	NA	**123**	**197**	**246**	**148**	**161**	**81.5**	**68.1**	**71.9**	**72.9**	-
Carbonate, Total (mg/L)	NA	NA	2 U	2 U	2 U	2 U	**9**	2 U	2 U	2 U	2 U	-
Chloride, Total (mg/L)	NA	NA	**43.7**	**103**	**139**	**46.2**	**58**	**67.7 J-**	**33.4**	**33**	**33.5**	-
Fluoride, Total (mg/L)	NA	NA	**0.36**	**0.65 J-**	1.25 U	**0.562**	**1.02 J-**	**0.254**	**0.146 J-**	**0.226**	**0.191**	-
Nitrate (as N), Total (mg/L)	10	10	**1.1**	**2.2**	**42**	**0.18**	0.1 U	**1.3 J-**	**190**	**190**	**180**	**0.09 J**
Nitrite (as N), Total (mg/L)	1	1	**0.19**	**0.09**	**4**	**0.032 J**	0.05 U	0.05 U	**1.3**	**1.4**	**1.5**	**0.051**
Orthophosphate, Total (mg/L)	NA	NA	**0.017**	**0.238 J**	-	-	**0.332**	**0.028 J**	**0.01**	**0.02**	**0.039**	-
Phosphorus, Total (mg/L)	NA	NA	**0.063**	**0.081**	-	-	**0.366**	**0.058**	**0.231**	-	-	-
Sulfate, Total (mg/L)	NA	NA	**71.3**	**758 J-**	**1050**	**84.6**	**302 J-**	**84.4**	**78 J-**	**80.8**	**76.7**	-

ABBREVIATIONS AND NOTES:
mg/L: milligrams per liter
NA: Not Applicable
ug/L: micrograms per liter
-: Not Analyzed

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Bold values indicate a detection above the reporting limit.
- Shaded values indicate an exceedance of the Overburden or Bedrock ROD Cleanup Level.
- Bedrock and Overburden ROD Cleanup Levels are from Table L-1 - Groundwater Cleanup Levels, as listed in the Record of Decision (ROD).

TABLE HB1-4
SUMMARY OF GROUNDWATER QUALITY DATA
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Location Name	Overburden ROD Cleanup Level	Bedrock ROD Cleanup Level	HA20-CMT-4D3	HA20-CMT-4I	HA20-CMT-4S	HA20-CMT-5(OW)	HA20-CMT-5(OW)	HA20-CMT-5D1	HA20-CMT-5D3	HA20-CMT-5I	HA20-CMT-5I2	HA20-CMT-5I2
Sample Name			HA20-CMT-4D3-07152021	HA20-CMT-4I-04122021	HA20-CMT-4S-04122021	HA20-CMT-5(OW)-04062021	HA20-CMT-5(OW)-04062021 DUP	HA20-CMT-5D1-07152021	HA20-CMT-5D3-07152021	HA20-CMT-5I-04132021	HA20-CMT-512-04142021	HA20-CMT-5I2-04142021
Sample Date			07/15/2021	04/12/2021	04/12/2021	04/06/2021	04/06/2021	07/15/2021	07/15/2021	04/13/2021	04/14/2021	04/14/2021
			550420001 550420002	541038015 541038016	541037015 541037016	540204019 540204020	540208001 540208002	550420003 550420004	550420005 550420006	541202009 541202010		541198001 541198002
Lab Sample ID			L2138148-01	L2118447-20	L2118447-09	L2117259-11	L2117259-12	L2138148-02	L2138148-03	L2118722-17	L2119025-04	L2119025-04
Volatile Organic Compounds (ug/L)												
1,1-Dichloroethane	NA	2.7	-	1 U	1 U	1 U	1 U	-	-	1 U	1 U	1 U
1,1-Dichloroethene	NA	NA	-	1 U	1 U	1 UJ	1 UJ	-	-	1 U	1 U	1 U
1,2,4-Trimethylbenzene	NA	NA	-	2 U	2 U	2 U	2 U	-	-	2 U	2 U	2 U
1,2-Dichloroethene (total)	NA	NA	-	1 U	**0.36 J**	1 U	1 U	-	-	1 U	1 U	1 U
1,3,5-Trimethylbenzene	NA	NA	-	2 U	2 U	2 U	2 U	-	-	2 U	2 U	2 U
1,4-Dioxane	0.46	0.46	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	NA	NA	-	5 U	5 U	5 U	5 U	-	-	5 U	5 U	5 U
2-Hexanone	NA	NA	-	5 U	5 U	5 U	5 U	-	-	5 U	5 U	5 U
Acetone	NA	NA	-	5 U	5 U	5 U	5 U	-	-	5 U	5 UJ	5 U
Benzene	NA	NA	-	0.5 U	0.5 U	0.5 U	0.5 U	-	-	0.5 U	0.5 U	0.5 U
Bromodichloromethane	NA	NA	-	1 U	1 U	**0.22 J**	**0.24 J**	-	-	1 U	1 U	1 U
Bromomethane (Methyl Bromide)	NA	NA	-	2 U	2 U	2 UJ	2 UJ	-	-	2 U	2 U	2 U
Carbon disulfide	NA	NA	-	2 U	2 U	2 U	2 U	-	-	2 U	2 UJ	2 U
Chloroform (Trichloromethane)	NA	NA	-	**0.45 J**	1 U	**0.43 J**	**0.47 J**	-	-	**0.92 J**	**1.2**	**1.2**
Chloromethane (Methyl Chloride)	NA	NA	-	2 U	2 U	2 U	2 U	-	-	2 U	2 U	2 U
cis-1,2-Dichloroethene	NA	NA	-	1 U	**0.36 J**	1 U	1 U	-	-	1 U	1 U	1 U
Dibromochloromethane	NA	NA	-	1 U	1 U	**0.16 J**	**0.16 J**	-	-	1 U	1 U	1 U
Ethylbenzene	NA	NA	-	1 U	1 U	1 U	1 U	-	-	1 U	1 U	1 U
m,p-Xylenes	NA	NA	-	2 U	2 U	2 U	2 U	-	-	2 U	2 U	2 U
Methylene chloride (Dichloromethane)	NA	NA	-	2 U	2 U	2 U	2 U	-	-	2 U	2 U	2 U
n-Butylbenzene	NA	NA	-	2 U	2 U	2 U	2 U	-	-	2 U	2 U	2 U
o-Xylene	NA	NA	-	1 U	1 U	1 U	1 U	-	-	1 U	1 U	1 U
Tetrachloroethene	5	5	-	**0.72 J**	**24**	1 U	1 U	-	-	1 U	1 U	1 U
Toluene	NA	NA	-	1 U	1 U	1 U	1 U	-	-	1 U	1 U	1 U
Trichloroethene	5	5	-	1 U	**2**	1 U	1 U	-	-	1 U	1 U	1 U
Xylene (total)	NA	NA	-	1 U	1 U	1 U	1 U	-	-	1 U	1 U	1 U
Semi-Volatile Organic Compounds (ug/L)												
bis(2-Chloroethyl)ether	NA	NA	-	2 UJ	2 UJ	2 UJ	2 UJ	-	-	2 UJ	2 UJ	2 U
bis(2-Ethylhexyl)phthalate	6	6	-	3 U	**2.7 J-**	3 UJ	3 U	-	-	3 U	**1.7 J-**	**1.7 J**
Diethyl phthalate	NA	NA	-	5 U	5 UJ	5 UJ	5 U	-	-	5 UJ	5 UJ	5 U
Phenol	NA	NA	-	5 UJ	5 UJ	5 UJ	5 UJ	-	-	5 UJ	5 UJ	5 U
Semi-Volatile Organic Compounds (SIM) (ug/L)												
1,4-Dioxane	0.46	0.46	**1.8**	**0.314**	**0.261**	**0.221**	**0.236**	0.139 U	**0.172**	0.139 U	0.134 U	0.134 U
2-Methylnaphthalene	NA	NA	-	0.1 UJ	0.1 UJ	**0.06 J-**	0.1 UJ	-	-	0.1 U	0.1 UJ	0.1 U
Acenaphthene	NA	NA	-	0.1 U	0.1 UJ	0.1 UJ	0.1 U	-	-	0.1 U	0.1 UJ	0.1 U
Acenaphthylene	NA	NA	-	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U	-	-	0.1 U	0.1 UJ	0.1 U
Benzo(a)anthracene	NA	NA	-	0.1 U	0.1 UJ	**0.02 J-**	0.1 U	-	-	0.1 U	0.1 UJ	0.1 U
Benzo(a)pyrene	NA	NA	-	0.1 U	0.1 U	0.1 UJ	0.1 U	-	-	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	NA	NA	-	0.1 U	0.1 UJ	0.1 UJ	0.1 U	-	-	0.1 U	**0.01 J**	**0.01 J**
Benzo(g,h,i)perylene	NA	NA	-	0.1 UJ	0.1 U	0.1 UJ	0.1 U	-	-	**0.07 J**	**0.02 J**	**0.02 J**
Benzo(k)fluoranthene	NA	NA	-	0.1 U	0.1 U	0.1 UJ	0.1 U	-	-	**0.05 J**	**0.01 J**	**0.01 J**
Chrysene	NA	NA	-	0.1 U	0.1 UJ	0.1 UJ	0.1 U	-	-	0.1 U	**0.01 J**	**0.01 J**
Dibenz(a,h)anthracene	NA	NA	-	0.1 U	0.1 U	0.1 UJ	0.1 U	-	-	**0.08 J**	**0.01 J**	**0.01 J**
Fluoranthene	NA	NA	-	0.1 U	0.1 U	**0.02 J-**	**0.02 J**	-	-	0.1 U	0.1 UJ	0.1 U
Fluorene	NA	NA	-	0.1 U	0.1 UJ	**0.02 J-**	0.1 U	-	-	0.1 U	0.1 UJ	0.1 U
Indeno(1,2,3-cd)pyrene	NA	NA	-	0.1 U	0.1 U	0.1 UJ	0.1 U	-	-	**0.07 J**	**0.01 J**	**0.01 J**
Naphthalene	NA	NA	-	0.1 U	0.1 UJ	**0.08 J-**	0.1 UJ	-	-	0.1 U	0.1 UJ	0.1 U
Phenanthrene	NA	NA	-	0.1 U	0.1 UJ	**0.03 J-**	0.1 U	-	-	0.1 U	0.1 UJ	0.1 U
Pyrene	NA	NA	-	0.1 U	0.1 U	0.1 UJ	0.1 U	-	-	0.1 U	0.1 U	0.1 U
Inorganic Compounds (ug/L)												
Aluminum, Dissolved	NA	NA	**25.6 J**	19.3 U	19.3 U	19.3 U	**41.4 J**	19.3 U	19.3 U	19.3 UJ	-	19.3 U
Antimony, Dissolved	NA	NA	**1.58 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	1 U
Arsenic, Dissolved	10	10	**4.06 J**	**2.67 J**	2 U	2 U	2 U	2 U	2 U	2 U	-	2 U
Barium, Dissolved	NA	2000	**24.2**	**16**	**26.4**	**33.1**	**32.7**	**25.8**	**28.8**	**23.8**	-	**31.6**
Beryllium, Dissolved	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	-	0.2 U
Cadmium, Dissolved	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	0.3 U
Calcium, Dissolved	NA	NA	**38000**	**30100**	**20700**	**42500**	**43200 N**	**29700**	**48300**	**23300**	-	**28500**
Chromium, Dissolved	100	100	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	-	3 U
Cobalt, Dissolved	6	6	**0.311 J**	**0.653 J**	0.3 U	**0.696 J**	**0.715 J**	**0.589 J**	0.3 U	0.3 U	-	**0.931 J**
Copper, Dissolved	1300	NA	**1.22 J**	0.3 U	**1.56 J**	**0.305 J**	0.3 U	**0.599 J**	**0.307 J**	**0.408 J**	-	**0.439 J**
Iron, Dissolved	14000	14000	33 U	**280**	33 U	33 U	**118**	33 U	**33.7 J**	**37.2 J**	-	33 U
Lead, Dissolved	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	-	0.5 U
Magnesium, Dissolved	NA	NA	**16100**	**7210**	**4930**	**8700**	**9210**	**7090**	**8680**	**5940**	-	**7240**
Manganese, Dissolved	300	300	**533**	**662**	**37.2**	**491**	**514**	**51.4**	**328**	**2.74 J**	-	**74**
Molybdenum, Dissolved	100	100	**39.8**	**14.2 J**	**5.94**	**2.22**	**2.35**	0.2 U	0.2 U	**0.205 J**	-	**1.31**
Nickel, Dissolved	NA	NA	0.6 U	**0.667 J**	**14.3**	**1.08 J**	**1.16 J**	**1.34 J**	0.6 U	**1.06 J**	-	**1.88 J**

TABLE HB1-4
SUMMARY OF GROUNDWATER QUALITY DATA
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Location Name	Overburden ROD Cleanup Level	Bedrock ROD Cleanup Level	HA20-CMT-4D3	HA20-CMT-4I	HA20-CMT-4S	HA20-CMT-5(OW)	HA20-CMT-5(OW)	HA20-CMT-5D1	HA20-CMT-5D3	HA20-CMT-5I	HA20-CMT-5I2	HA20-CMT-5I2
Sample Name			HA20-CMT-4D3-07152021	HA20-CMT-4I-04122021	HA20-CMT-4S-04122021	HA20-CMT-5(OW)-04062021	HA20-CMT-5(OW)-04062021 DUP	HA20-CMT-5D1-07152021	HA20-CMT-5D3-07152021	HA20-CMT-5I-04132021	HA20-CMT-512-04142021	HA20-CMT-5I2-04142021
Sample Date			07/15/2021	04/12/2021	04/12/2021	04/06/2021	04/06/2021	07/15/2021	07/15/2021	04/13/2021	04/14/2021	04/14/2021
			550420001	541038015	541037015	540204019	540208001	550420003	550420005	541202009		541198001
			550420002	541038016	541037016	540204020	540208002	550420004	550420006	541202010		541198002
Lab Sample ID			L2138148-01	L2118447-20	L2118447-09	L2117259-11	L2117259-12	L2138148-02	L2138148-03	L2118722-17	L2119025-04	L2119025-04
Potassium, Dissolved	NA	NA	**2770**	**4270**	**3560**	**6070**	**6750**	**3870**	**5630**	**3130**	-	**4160**
Selenium, Dissolved	NA	NA	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	2 U
Silver, Dissolved	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	0.3 U
Sodium, Dissolved	NA	NA	**42900**	**54500 J**	**28900**	**11800**	**12000**	**30200**	**10500**	**28700**	-	**30100**
Thallium, Dissolved	NA	NA	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	-	0.6 U
Thorium, Dissolved	0.33	0.33	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	-	0.7 U
Uranium, Dissolved	30	30	**19.9**	**27.2**	**133**	**4.96**	**5.53**	**0.451**	**4.66**	**0.447**	-	**0.385**
Uranium-235, Dissolved	30	30	**0.146**	**0.0644 J**	**0.255**	**0.034 J**	**0.0407 J**	0.01 U	**0.0342 J**	0.01 U	-	0.01 U
Uranium-238, Dissolved	30	30	**19.7**	**27.1**	**133**	**4.93**	**5.49**	**0.451**	**4.62**	**0.447**	-	**0.385**
Vanadium, Dissolved	NA	NA	**3.39 J**	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	**4.21 J**	3.3 U	-	3.3 U
Zinc, Dissolved	NA	NA	3.3 U	**4.27 J**	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	-	3.3 U
Inorganic Compounds (ug/L)												
Aluminum, Total	NA	NA	**26.4 J**	**350 J**	19.3 U	**185 J**	**411 J**	**32.6 J**	**52.5**	19.3 UJ	-	19.3 U
Antimony, Total	NA	NA	**1.61 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	1 U
Arsenic, Total	10	10	**4.27 J**	**2.91 J**	2 U	2 U	2 U	2 U	2 U	2 U	-	2 U
Barium, Total	NA	2000	**23.9**	**20.4 J**	**26.2**	**35**	**35.3**	**25.6**	**29.4**	**24.2**	-	**30.1**
Beryllium, Total	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	-	0.2 U
Cadmium, Total	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	0.3 U
Calcium, Total	NA	NA	**38300**	**29600**	**20600**	**41600**	**41600 N**	**29600**	**48200**	**24000**	-	**27300**
Chromium, Total	100	100	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	-	3 U
Cobalt, Total	6	6	**0.333 J**	**1.36 J**	0.3 U	**0.872 J**	**0.926 J**	**0.61 J**	0.3 U	0.3 U	-	**0.913 J**
Copper, Total	1300	NA	**0.323 J**	**3.23**	**1.35 J**	0.3 UJ	**0.51 J**	0.3 U	0.3 U	0.3 U	-	0.3 UJ
Iron, Total	14000	14000	**51.9 J**	**1060 J**	33 U	**307 J**	**491 J**	**74.5 J**	**86.1 J**	33 U	-	33 U
Lead, Total	NA	NA	0.5 U	**0.955 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	-	0.5 U
Magnesium, Total	NA	NA	**16400**	**7080**	**4890**	**8580**	**9590**	**7170**	**8610**	**6120**	-	**6970**
Manganese, Total	300	300	**560**	**682 J**	**36.7**	**519**	**531**	**52.8**	**336**	**2.53 J**	-	**69.9**
Molybdenum, Total	100	100	**39.8**	**11.1 J**	**5.86**	**2.26**	**2.47**	0.2 U	0.2 U	0.2 UJ	-	**1.34**
Nickel, Total	NA	NA	0.6 U	**1.43 J**	**13.7**	**0.964 J**	**1.18 J**	**1.32 J**	0.6 U	**0.777 J**	-	**1.53 J**
Potassium, Total	NA	NA	**2820**	**4260**	**3520**	**6060**	**6870**	**3870**	**5580**	**3240**	-	**4150**
Selenium, Total	NA	NA	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	2 U
Silver, Total	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-	0.3 U
Sodium, Total	NA	NA	**43800**	**54500 J**	**28400**	**11700**	**11600**	**30400**	**10400**	**29300**	-	**28900**
Thallium, Total	NA	NA	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	-	0.6 U
Thorium, Total	0.33	0.33	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	-	0.7 U
Uranium, Total	30	30	**19.4**	**27.8 J**	**160**	**5.01**	**5.72**	**0.581**	**4.59**	**0.838**	-	**0.61**
Uranium-235, Total	30	30	**0.14**	**0.0643 J**	**0.301**	**0.0341 J**	**0.0429 J**	0.01 U	**0.0327 J**	0.01 U	-	0.01 U
Uranium-238, Total	30	30	**19.2**	**27.7 J**	**160**	**4.98**	**5.67**	**0.581**	**4.55**	**0.838**	-	**0.61**
Vanadium, Total	NA	NA	**3.55 J**	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	**4.39 J**	3.3 U	-	3.3 U
Zinc, Total	NA	NA	3.3 U	**7.8 J**	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	-	3.3 U
Other												
Dissolved Organic Carbon (DOC) (mg/L)	NA	NA	**3.7**	-	-	**0.57 J**	**0.58 J**	**0.44 J**	**0.38 J**	-	-	-
Alkalinity, Bicarbonate (as CaCO3), Total (mg/L)	NA	NA	**96.3**	-	-	**70**	**68.5**	**27**	**67.7**	-	-	-
Carbonate, Total (mg/L)	NA	NA	2 U	-	-	2 U	2 U	2 U	2 U	-	-	-
Chloride, Total (mg/L)	NA	NA	**45.8**	-	-	**60.2**	**59.9**	**81.6**	**55.5**	-	-	-
Fluoride, Total (mg/L)	NA	NA	**0.149**	-	-	**0.079 J-**	**0.066 J-**	0.05 U	**0.046 J**	-	-	-
Nitrate (as N), Total (mg/L)	10	10	**1.1**	**0.027 J**	**3.4**	**0.066 J**	**0.065 J**	**3.1**	**0.21**	**2.9**	**3.1**	**3.1**
Nitrite (as N), Total (mg/L)	1	1	**0.48**	0.05 U	0.05 U	**0.026 J**	**0.026 J**	**0.022 J**	**0.061**	0.05 U	**0.026 J**	**0.026 J**
Orthophosphate, Total (mg/L)	NA	NA	-	-	-	0.005 U	0.005 U	-	-	-	-	-
Phosphorus, Total (mg/L)	NA	NA	-	-	-	**0.022**	**0.019**	-	-	-	-	-
Sulfate, Total (mg/L)	NA	NA	**83.6**	-	-	**35.2 J-**	**35.3 J-**	**16.7**	**39.7**	-	-	-

ABBREVIATIONS AND NOTES:
mg/L: milligrams per liter
NA: Not Applicable
ug/L: micrograms per liter
-: Not Analyzed

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Bold values indicate a detection above the reporting limit.
- Shaded values indicate an exceedance of the Overburden or Bedrock ROD Cleanup Level.
- Bedrock and Overburden ROD Cleanup Levels are from Table L-1 - Groundwater Cleanup Levels, as listed in the Record of Decision (ROD).

TABLE HB1-4
SUMMARY OF GROUNDWATER QUALITY DATA
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

	Overburden ROD Cleanup Level	Bedrock ROD Cleanup Level						
Location Name			HA20-CMT-5S	HA20-CMT-6(OW)	HA20-CMT-6D1	HA20-CMT-6D3	HA20-CMT-6I	HA20-CMT-6S
Sample Name			HA20-CMT-5S-04132021	HA20-CMT-6(OW)-04062021	HA20-CMT-6D1-04142021	HA20-CMT-6D3-07162021	HA20-CMT-6I-04142021	HA20-CMT-6S-04142021
Sample Date			04/13/2021	04/06/2021	04/14/2021	07/16/2021	04/14/2021	04/14/2021
			541202001	540204013	541200001	550420007	541199015	541198019
			541202002	540204014	541200002	550420008	541199016	541198020
Lab Sample ID			L2118722-13	L2117259-08	L2119379-01	L2138330-01	L2119025-21	L2119025-11
Volatile Organic Compounds (ug/L)								
1,1-Dichloroethane	NA	2.7	1 U	1 U	1 U	-	1 U	1 U
1,1-Dichloroethene	NA	NA	1 U	1 U	1 U	-	1 U	1 U
1,2,4-Trimethylbenzene	NA	NA	**0.2 J**	2 U	2 U	-	2 U	2 U
1,2-Dichloroethene (total)	NA	NA	**0.46 J**	1 U	1 U	-	1 U	1 U
1,3,5-Trimethylbenzene	NA	NA	2 U	2 U	2 U	-	2 U	2 U
1,4-Dioxane	0.46	0.46	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	NA	NA	5 U	5 U	5 U	-	5 U	5 U
2-Hexanone	NA	NA	5 U	5 U	5 U	-	5 U	5 U
Acetone	NA	NA	5 U	5 U	5 U	-	5 U	5 UJ
Benzene	NA	NA	0.5 U	0.5 U	0.5 U	-	0.5 U	0.5 U
Bromodichloromethane	NA	NA	1 U	1 U	1 U	-	1 U	1 U
Bromomethane (Methyl Bromide)	NA	NA	2 U	2 U	2 U	-	2 U	2 U
Carbon disulfide	NA	NA	2 U	2 U	2 U	-	2 U	2 UJ
Chloroform (Trichloromethane)	NA	NA	1 U	1 U	1 U	-	**0.3 J+**	**0.28 J**
Chloromethane (Methyl Chloride)	NA	NA	2 U	2 U	2 U	-	2 U	2 U
cis-1,2-Dichloroethene	NA	NA	**0.46 J**	1 U	1 U	-	1 U	1 U
Dibromochloromethane	NA	NA	1 U	1 U	1 U	-	1 U	1 U
Ethylbenzene	NA	NA	1 U	1 U	1 U	-	1 U	1 U
m,p-Xylenes	NA	NA	2 U	2 U	2 U	-	2 U	2 U
Methylene chloride (Dichloromethane)	NA	NA	2 U	2 U	2 U	-	2 U	2 U
n-Butylbenzene	NA	NA	2 U	2 U	2 U	-	2 U	2 U
o-Xylene	NA	NA	1 U	1 U	1 U	-	1 U	1 U
Tetrachloroethene	5	5	1 U	1 U	1 U	-	1 U	**0.18 J**
Toluene	NA	NA	**0.21 J**	1 U	**0.31 J**	-	1 U	1 U
Trichloroethene	5	5	1 U	1 U	1 UJ	-	1 U	1 U
Xylene (total)	NA	NA	1 U	1 U	1 U	-	1 U	1 U
Semi-Volatile Organic Compounds (ug/L)								
bis(2-Chloroethyl)ether	NA	NA	2 UJ	**2 J-**	**1.7 J**	-	2 U	2 UJ
bis(2-Ethylhexyl)phthalate	6	6	**2.1 J**	3 U	3 U	-	3 U	**29 J-**
Diethyl phthalate	NA	NA	5 UJ	5 U	5 U	-	5 UJ	5 UJ
Phenol	NA	NA	5 UJ	5 UJ	5 UJ	-	5 UJ	5 UJ
Semi-Volatile Organic Compounds (SIM) (ug/L)								
1,4-Dioxane	0.46	0.46	**0.875**	**0.226**	**0.226**	**0.234**	**0.228**	0.139 U
2-Methylnaphthalene	NA	NA	**0.02 J**	0.1 UJ	0.1 UJ	-	0.1 UJ	0.1 UJ
Acenaphthene	NA	NA	**0.03 J**	0.1 U	0.1 UJ	-	0.1 U	0.1 UJ
Acenaphthylene	NA	NA	0.1 UJ	0.1 U	0.1 U	-	0.1 U	0.1 U
Benzo(a)anthracene	NA	NA	0.1 U	**0.09 J**	0.1 UJ	-	0.1 U	0.1 UJ
Benzo(a)pyrene	NA	NA	0.1 U	**0.07 J**	0.1 U	-	0.1 U	0.1 U
Benzo(b)fluoranthene	NA	NA	0.1 U	**0.11**	0.1 U	-	0.1 U	**0.02 J**
Benzo(g,h,i)perylene	NA	NA	0.1 U	**0.07 J**	0.1 U	-	0.1 U	0.1 U
Benzo(k)fluoranthene	NA	NA	0.1 U	**0.05 J**	0.1 U	-	0.1 U	**0.01 J**
Chrysene	NA	NA	0.1 U	**0.08 J**	0.1 U	-	0.1 U	**0.01 J**
Dibenz(a,h)anthracene	NA	NA	0.1 U	**0.02 J**	0.1 U	-	0.1 U	0.1 U
Fluoranthene	NA	NA	0.1 UJ	**0.1**	0.1 U	-	0.1 U	**0.02 J**
Fluorene	NA	NA	0.1 UJ	0.1 U	0.1 UJ	-	0.1 U	0.1 UJ
Indeno(1,2,3-cd)pyrene	NA	NA	0.1 U	**0.08 J**	0.1 U	-	0.1 U	0.1 U
Naphthalene	NA	NA	0.1 U	0.1 UJ	0.1 UJ	-	0.1 UJ	0.1 UJ
Phenanthrene	NA	NA	0.1 UJ	**0.03 J**	0.1 UJ	-	0.1 U	0.1 UJ
Pyrene	NA	NA	0.1 U	**0.1 J**	0.1 U	-	0.1 U	0.1 U
Inorganic Compounds (ug/L)								
Aluminum, Dissolved	NA	NA	**52.8 J**	19.3 U	19.3 U	**19.3 J**	19.3 U	19.3 U
Antimony, Dissolved	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic, Dissolved	10	10	**6.64**	2 U	**5.07**	**3.88 J**	**3.72 J**	2 U
Barium, Dissolved	NA	2000	**11**	**23.3**	**16.5**	**21.2**	**31.6**	**20.1**
Beryllium, Dissolved	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium, Dissolved	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Calcium, Dissolved	NA	NA	**5090**	**47000**	**49400**	**53800**	**48300**	**885**
Chromium, Dissolved	100	100	3 U	3 U	3 U	3 U	3 U	3 U
Cobalt, Dissolved	6	6	**6.38**	**0.659 J**	**0.493 J**	0.3 U	**0.578 J**	**0.785 J**
Copper, Dissolved	1300	NA	**0.37 J**	**0.321 J**	0.3 U	0.3 U	0.3 U	**0.545 J**
Iron, Dissolved	14000	14000	**11200**	33 U	**69 J**	**167**	**837**	33 U
Lead, Dissolved	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Magnesium, Dissolved	NA	NA	**1070**	**9420**	**9040**	**8980**	**7190**	**6580**
Manganese, Dissolved	300	300	**901**	**512**	**893**	**486**	**946**	**18.4**
Molybdenum, Dissolved	100	100	**1.78**	**4.57**	**51**	**11.6**	**42**	**0.951 J**
Nickel, Dissolved	NA	NA	**4.34**	**0.818 J**	0.6 U	0.6 U	0.6 U	**1.89 J**

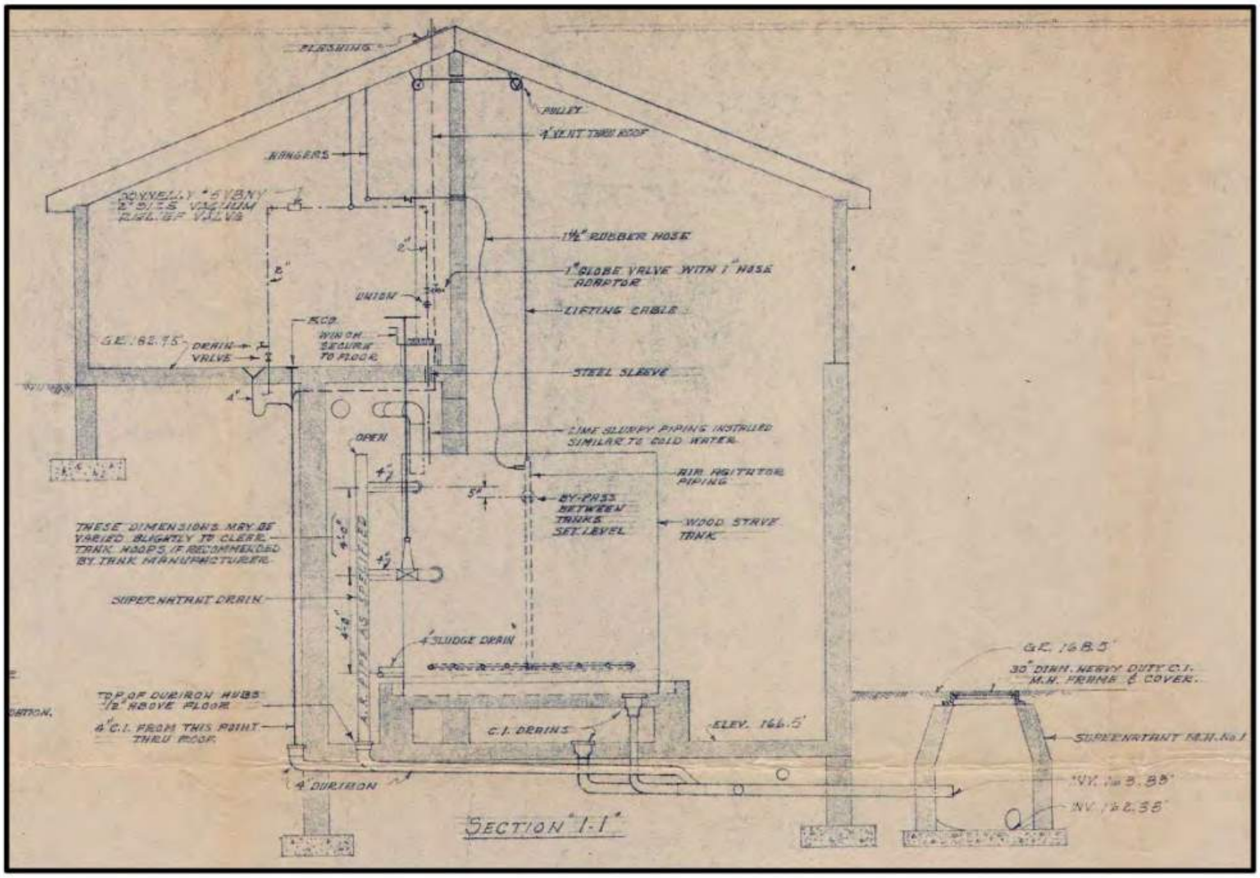
TABLE HB1-4
SUMMARY OF GROUNDWATER QUALITY DATA
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Location Name / Sample Name / Sample Date / Lab Sample ID	Overburden ROD Cleanup Level	Bedrock ROD Cleanup Level	HA20-CMT-5S HA20-CMT-5S-04132021 04/13/2021 541202001 541202002 L2118722-13	HA20-CMT-6(OW) HA20-CMT-6(OW)-04062021 04/06/2021 540204013 540204014 L2117259-08	HA20-CMT-6D1 HA20-CMT-6D1-04142021 04/14/2021 541200001 541200002 L2119379-01	HA20-CMT-6D3 HA20-CMT-6D3-07162021 07/16/2021 550420007 550420008 L2138330-01	HA20-CMT-6I HA20-CMT-6I-04142021 04/14/2021 541199015 541199016 L2119025-21	HA20-CMT-6S HA20-CMT-6S-04142021 04/14/2021 541198019 541198020 L2119025-11
Potassium, Dissolved	NA	NA	**1890**	**5180**	**8770**	**5220**	**7910**	**3540**
Selenium, Dissolved	NA	NA	2 U	2 U	2 U	2 U	2 U	2 U
Silver, Dissolved	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Sodium, Dissolved	NA	NA	**6090**	**11200**	**15800**	**52800**	**33700**	**29200**
Thallium, Dissolved	NA	NA	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Thorium, Dissolved	0.33	0.33	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Uranium, Dissolved	30	30	**0.491**	**7.85**	**12.4**	**5.11**	**9.12**	**0.11 J**
Uranium-235, Dissolved	30	30	0.01 U	**0.0554 J**	**0.0867**	**0.0355 J**	**0.0605 J**	0.01 U
Uranium-238, Dissolved	30	30	**0.491**	**7.8**	**12.4**	**5.07**	**9.06**	**0.11 J**
Vanadium, Dissolved	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
Zinc, Dissolved	NA	NA	3.3 U	3.3 U	**3.82 J**	3.3 U	3.3 U	3.3 U
Inorganic Compounds (ug/L)								
Aluminum, Total	NA	NA	**213 J**	**110 J**	**41.9 J**	**22.5 J**	**22.1 J**	**24 J**
Antimony, Total	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic, Total	10	10	**7.14**	2 U	**5.05**	**3.94 J**	**3.67 J**	2 U
Barium, Total	NA	2000	**12.5**	**24.7**	**16.5**	**21.4**	**32.2**	**20.3**
Beryllium, Total	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium, Total	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Calcium, Total	NA	NA	**5340**	**47900**	**49800**	**52700**	**48600**	**889**
Chromium, Total	100	100	3 U	3 U	3 U	3 U	3 U	3 U
Cobalt, Total	6	6	**6.86**	**0.799 J**	**0.506 J**	0.3 U	**0.567 J**	**0.779 J**
Copper, Total	1300	NA	**1.91 J**	0.3 UJ	**0.379 J**	0.3 U	0.3 U	**0.307 J**
Iron, Total	14000	14000	**12100**	**227 J**	**101**	**175**	**864 J**	**47.4 J**
Lead, Total	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Magnesium, Total	NA	NA	**1170**	**9630**	**8990**	**8810**	**7240**	**6610**
Manganese, Total	300	300	**949**	**540**	**929**	**502**	**944**	**19.5**
Molybdenum, Total	100	100	**1.95**	**4.42**	**50.4**	**11.3**	**42.2**	**1.12**
Nickel, Total	NA	NA	**4.73**	**0.767 J**	0.6 U	0.6 U	0.6 U	**1.73 J**
Potassium, Total	NA	NA	**2040**	**5350**	**8770**	**5020**	**7940**	**3620**
Selenium, Total	NA	NA	2 U	2 U	2 U	2 U	2 U	2 U
Silver, Total	NA	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Sodium, Total	NA	NA	**6460**	**11500**	**15700**	**53700**	**33300**	**29200**
Thallium, Total	NA	NA	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Thorium, Total	0.33	0.33	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Uranium, Total	30	30	**0.725**	**8.07**	**12.4**	**4.93**	**9.32**	**0.198 J**
Uranium-235, Total	30	30	0.01 U	**0.0573 J**	**0.0859**	**0.0341 J**	**0.0648 J**	0.01 U
Uranium-238, Total	30	30	**0.725**	**8.01**	**12.3**	**4.9**	**9.25**	**0.198 J**
Vanadium, Total	NA	NA	**3.73 J**	**3.64 J**	3.3 U	3.3 U	3.3 U	3.3 U
Zinc, Total	NA	NA	3.3 U	**5.28 J**	3.3 UJ	3.3 U	3.3 U	3.3 U
Other								
Dissolved Organic Carbon (DOC) (mg/L)	NA	NA	-	**0.58 J**	**1.2 J**	**10 J**	**2.9**	**0.4 J**
Alkalinity, Bicarbonate (as CaCO3), Total (mg/L)	NA	NA	-	**76.4**	**83.4**	**81.7**	**86.7**	**28.2**
Carbonate, Total (mg/L)	NA	NA	-	2 U	2 U	2 U	2 U	2 U
Chloride, Total (mg/L)	NA	NA	-	**63.8**	**60 J-**	**67.2**	**63.7 J-**	**74.1 J-**
Fluoride, Total (mg/L)	NA	NA	-	**0.07 J-**	**0.113 J-**	**0.076**	**0.206**	**0.041 J**
Nitrate (as N), Total (mg/L)	10	10	0.1 U	0.1 U	0.1 U	**0.2**	**0.062 J**	**4.3**
Nitrite (as N), Total (mg/L)	1	1	0.05 U	0.05 U	0.05 U	**0.026 J**	0.05 U	0.05 U
Orthophosphate, Total (mg/L)	NA	NA	-	0.005 U	**0.016 J**	-	**0.003 J**	**0.005 J**
Phosphorus, Total (mg/L)	NA	NA	-	**0.025**	**0.03 J**	-	**0.036**	0.01 UJ
Sulfate, Total (mg/L)	NA	NA	-	**36.7 J-**	**47.5 J-**	**140**	**59.4 J-**	**16.9 J-**

ABBREVIATIONS AND NOTES:
mg/L: milligrams per liter
NA: Not Applicable
ug/L: micrograms per liter
-: Not Analyzed

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Bold values indicate a detection above the reporting limit.
- Shaded values indicate an exceedance of the Overburden or Bedrock ROD Cleanup Level.
- Bedrock and Overburden ROD Cleanup Levels are from Table L-1 - Groundwater Cleanup Levels, as listed in the Record of Decision (ROD).

HB1 FIGURES



NOTE:

1. CROSS SECTION FROM DRAWING TITLED WASTE TREATMENT FOR NUCLEAR METALS INC. PREPARED BY J.Q. ADAMS DATED DECEMBER 1957.

HALEY ALDRICH

NUCLEAR METALS, INC.
2229 MAIN STREET
CONCORD, MASSACHUSETTS

HISTORIC TANK HOUSE PLAN

SCALE: None
SEPTEMBER 2022

FIGURE HB1-1

LEGEND

- EXISTING GROUND SURFACE (NOTE 1)
- TOP OF TILL
- TOP OF BEDROCK
- URANIUM µg/L ISOCONCENTRATION CONTOUR THROUGH JULY 2021(DASHED WHERE INFERRED)
- DEPLETED URANIUM µg/L ISOCONCENTRATION CONTOUR JULY 2021
- APPROXIMATE POTENTIOMETRIC SURFACE IN BEDROCK GROUNDWATER
- APPROXIMATE WATER TABLE ELEVATION
- INFERRED GROUNDWATER FLOW DIRECTION IN BEDROCK

MONITORING WELL
- SCREENED INTERVAL
- 2.4 ISOTOPICALLY NATURAL URANIUM (µg/L)
- 58.6 DEPLETED URANIUM (µg/L)
- PACKER TEST INTERVAL
- (44.2) PACKER TEST RESULTS OCTOBER 2020

SEE NOTE 6

- 30 µg/L - 2015 ROD RG.
- OVERBURDEN
- GLACIAL TILL
- ANDOVER GRANITE WEATHERED BEDROCK
- SHAWSHEEN GNEISS WEATHERED BEDROCK
- ASSABET QUARTZ DIORITE BEDROCK
- SHAWSHEEN GNEISS BEDROCK
- ANDOVER GRANITE BEDROCK
- FRACTURE INTERPRETED IN BEDROCK CORES OR GEOPHYSICAL LOGS

NOTES:

1. THE CROSS-SECTION ALIGNMENT IS SHOWN IN PLAN VIEW ON FIGURE 2-7.
2. GROUND SURFACE FROM TOPOGRAPHIC MAP TITLED "EXISTING CONDITIONS PLAN 2229 MAIN STREET, CONCORD MASS" PREPARED BY FELDMAN LAND SURVEYORS, DATED 2020-6-19 AND FROM AN AERIAL MAP FLOWN IN NOVEMBER 2001 PREPARED BY SANBORN INC. AND IS APPROXIMATE.
3. ALL DATA COLLECTED IN APRIL 2021 EXCEPT FOR PACKER TEST DATA AT OPEN BEDROCK (BEW) WELLS COLLECTED IN OCTOBER 2020, MW-B1D13, MW-B2D13, MW-B3D13, MW-B1D28, AND MW-B2D28 COLLECTED IN MAY AND JUNE 2021. WELLS HA20-CMT1-D1/D2, CMT2-D2/D3,CMT3-D3/D4/T(OW) SAMPLED IN JULY 2021.
4. J = ESTIMATED VALUE: COMPOUND IS DETECTED, BUT BELOW THE SAMPLE QUANTITATION LIMIT. NS = NOT SAMPLED.
5. DEPTHS TO TOP OF BEDROCK AND WELL SCREENS ARE APPROXIMATE.
6. WELL NAME DESIGNATIONS FROM LEFT TO RIGHT INDICATE THE SHALLOWEST TO THE DEEPEST AT THAT LOCATION. BEDROCK EXTRACTION WELLS (BEW) SHADED GREEN ARE OPEN BEDROCK BOREHOLES, EXCEPT BEW-5 WHICH HAS A 4-INCH DIAMETER, 20-FOOT LONG STAINLESS STEEL SCREEN.
7. RG = REMEDIATION GOAL. ROD = RECORD OF DECISION, SEPTEMBER 2015. BEW - BEDROCK EXTRACTION WELL
8. ORANGE ISOCONCENTRATION CONTOURS LINES DEPICT VERTICAL DISTRIBUTION OF ISOTOPICALLY NATURAL URANIUM IN GROUNDWATER. FOR OPEN BEDROCK BOREHOLES, THE APRIL 2021 OPEN BOREHOLE MONITORING DATA WAS USED FOR CONTOURING (NOT OCTOBER 2020 PACKER TEST RESULTS).
9. ANALYTICAL CONCENTRATION CONTOURS DO NOT HONOR ALL OF THE DATA PRESENTED, BUT ILLUSTRATE A CONSERVATIVE INTERPRETATION (I.E. USING THE HIGHER VALUE WHEN NECESSARY). SOME DATA WERE POSTED, BUT NOT USED IN CONTOURING BECAUSE THE WELL LOCATION IS VERY FAR FROM THE CROSS-SECTION LINE.

0 80
HORZ. SCALE IN FEET

0 20
VERT. SCALE IN FEET

DRAFT

Section A
Uranium Concentrations in Groundwater through July 2021

Nuclear Metals, Inc. Superfund Site Concord, Massachusetts

Geosyntec consultants

FIGURE 2-5A

ACTON, MA | SEPTEMBER 2021

T:\PROJECTS_CADD\N\NMI (NUCLEAR METALS SUPERFUND SITE)\FIGURES\2021 SECTIONS\BR0090B-F107 (SEC A B - 2021.06 URANIUM - DIOX)

HALEY & ALDRICH PRE-DESIGN INVESTIGATION HOLDING BASIN SUMMARY **FIGURE HB1-2**
SEPTEMBER 2022

EXHIBIT HB1-1

Test Boring Logs, Test Pit Logs, and Auto-Hammer Calibration Reports

Test Boring Logs

Boring Log and Well Completion Report

Borehole Log ID: HA20-B101 — Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	18 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985866.297 E 677742.2255	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	160.25	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Applicable	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
0			Medium dense, grey to brown, poorly graded SAND (SP-SM) with silt, mps 1.0 in., no structure, no odor, moist	0-2	11	4 5 6 6	SP-SM	
			Loose, grey to brown, poorly graded SAND (SP-SM) with silt, mps 1.2 in., no structure, no odor, moist	2-4	8	6 5 4 4	SP-SM	
5			Very loose, grey to brown, poorly graded SAND (SP-SM) with silt, mps 0.8 in., no structure, no odor, moist -FILL-	4-6	12	6 3 1 2	SP-SM	
			NO RECOVERY	6-8	NR	6 3 4 3		
			Medium dense, brown to tan, poorly graded SAND (SP), mps 0.3 in., no structure, no odor, moist	8-10	18	5 7 5 6		
10			Medium dense, yellow to tan, Silty SAND (SM), mps <1.0 mm, no structure, no odor, moist -ICE CONTACT DEPOSITS-	10-12	21	5 12 10 7	SM	
			Medium dense, yellow to brown to tan, silty SAND (SM), mps 0.5 in., no structure, no odor, moist.	12-14	10	7 10 6 6	SM	
15			Medium Dense, yellow to brown to tan, poorly graded SAND (SP), mps <2.0 mm, no structure, no odor, moist	14-16	13	4 7 6 8	SP	
			Medium Dense, yellow to brown, poorly graded SAND (SP-SM) with silt, mps 0.5 in., no structure, no odor, moist	16-18	12	8 13 12 13	SP-SM	
			Medium dense, brown, poorly graded SAND (SP) with gravel, mps 2.0 in., no structure, no odor, wet	18-20	9	7 10 7 10	SP SP	
20			Medium dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet	20-22	7	8 10 9 8	SP	
			NO RECOVERY	22-24	NR	10 11 10 9		
25			Medium dense, brown, poorly graded SAND (SP), mps 0.4 in., no structure, no odor, wet. -ICE CONTACT DEPOSITS-	24-26	11	8 10 9 15	SP	
			Medium dense, brown, poorly graded SAND (SP), mps 1.2 in., no structure, no odor, wet	26-28	11	10 10 10 11	SP	
			Medium dense, brown, brown, poorly graded SAND (SP) with gravel, mps 1.1 in., no structure, no odor, wet	28-30	7	11 17 13 15	SP	
30			BOTTOM OF EXPLORATION AT 30.0 FT					

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-B102 Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	24 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985854.763 E 677783.1551	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	159.61	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Applicable	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
0			Medium dense, grey, poorly graded SAND (SP-SM) with silt, mps 1.0 in., no structure, no odor, moist	0-2	11	2 6 9 11		
			Loose, grey, poorly graded SAND (SP-SM) with silt, mps 1.2 in., no structure, no odor, moist	2-4	17	6 5 3 5	SP-SM	
5			Loose, grey, poorly graded SAND (SP-SM) with silt, mps 0.8 in., no structure, no odor, moist	4-6	14	3 4 4 4	SP-SM SP-SM	
			Poly sheeting encountered at 6.0 ft. depth Loose, grey, poorly graded SAND (SP-SM) with silt, mps 0.5 in., no structure , no odor, moist	6-8	16	5 5 5 6	SP-SM	
			Loose, grey, poorly graded SAND (SP-SM) with silt, mps 0.5 in., no structure , no odor, moist -ICE CONTACT DEPOSITS-	8-10	10	6 10 10 11	SP	
10			Medium dense, brown, poorly graded SAND (SP), mps 1.0 in., no structure, no odor, moist	10-12	11	5 15 14 17	SP	
			Very dense, brown, poorly graded SAND (SP) with gravel, mps 1.5 in., no structure, no odor, wet	12-14	6	11 34 20 17	SP	
15			Dense, brown, poorly graded SAND (SP) with gravel, mps 1.5 in., no structure, no odor, wet	14-16	7	24 18 13 25	SP	
			NO RECOVERY	16-18	NR	7 4 5 3		
			NO RECOVERY	18-20	NR	12 25 11 10		
20			Medium dense, brown, poorly graded SAND (SP), mps 0.3 in., no structure, no odor, wet	20-22	6	19 7 4 3	SP	
			NO RECOVERY	22-24	NR	7 4 2 5		
25			Medium dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	24-26	5	10 7 5 3	SP	
			Medium dense, brown, poorly graded SAND (SP), mps 0.8 in., no structure, no odor, wet	26-28	4	16 10 6 7	SP	
			Loose, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet	28-30	7	3 3 4 5	SP	
30			Dense, brown, well graded SAND (SW), mps 0.2 in., no structure, no odor, wet	30-32	7	8 25 8 9	SW	
			NO RECOVERY					

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-B102 — Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	24 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985854.763 E 677783.1551	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	159.61	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Applicable	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
				32-34	NR	36 28 7 8		
35			Loose, brown, poorly graded SAND (SP), mps 0.3 in., no structure, no odor, wet	34-36	7	5 4 5 8	SP	
			Medium dense, brown, silty SAND (SM), mps <1.0 mm, no structure, no odor, wet	36-38	12	16 10 7 7	SM	
			Medium dense, brown, well graded SAND (SW), mps <5.0 mm, no structure, no odor, wet	38-40	10	6 8 5 6	SW	
40			Medium dense brown, poorly graded SAND (SP) with gravel, mps 0.3 in., no structure, no odor, wet	40-42	3	15 9 7 8	SP	
			Medium dense, brown, poorly graded SAND (SP) with gravel, mps 1.3 in., no structure, no odor, wet	42-44	8	10 9 8 8	SP	
45			Medium dense, brown, poorly graded SAND (SP) with gravel mps 0.6 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	44-46	7	5 9 4 3	SP	
			Loose, brown, poorly graded SAND (SP), mps <4.75 mm, no structure, no odor, wet	46-48	14	4 4 3 5	SP	
			NO RECOVERY	48-50	NR	7 5 4 9		
50			Medium dense, brown, poorly graded SAND (SP), mps 0.6 in., no structure, no odor, wet	50-52	15	5 7 7 9	SP	
			Medium dense, brown, poorly graded SAND (SP), mps 0.6 in., no structure, no odor, wet	52-54	10	17 12 12 18	SP	
55			Dense, brown, poorly graded SAND (SP), mps <5.0 mm, no structure, no odor, wet	54-56	15	16 16 21 42	SP	
			Dense, brown, poorly graded SAND (SP-SC) with clay, mps 0.6 in., moderately bonded, no odor, wet - GLACIAL TILL- Medium dense, brown, poorly graded SAND (SP-SC) with clay, mps 0.3 in., moderately bonded, no odor, wet, large sand pocket	56-58	12	7 9 16 39	SP-SC SP-SC	
			Dense, brown, poorly graded SAND (SP-SC) with clay, mps 0.4 in., well bonded, no odor, wet - GLACIAL TILL-	58-60	17	3 15 22 35	SP-SC	
60			BOTTOM OF EXPLORATION AT 60.0 FT					
65								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-B103 — Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	17 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Sch. 40 PVC
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985811.319 E 677768.9	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	160.64	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Applicable	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
0			Medium dense, brown to grey, poorly graded SAND (SP-SM) with silt, mps 1.0 in., no structure, no odor, moist	0-2	22	5 10 12 23	SP-SM	
			Medium dense, brown to grey, poorly graded SAND (SP-SM) with silt, mps 1.0 in., no structure , no odor, moist	2-4	16	12 11 10 7	SP-SM	
5			Medium dense, brown to grey, poorly graded SAND (SP-SM) with silt, mps 0.8 in., no structure, no odor, moist -FILL- Poly sheeting encountered at 6.0 ft depth	4-6	15	11 7 6 1	SP-SM	
			Medium dense, brown, poorly graded SAND (SP) with gravel, mps 1.0 in., no structure, no odor, dry	6-8	9	5 12 12 11	SP	
			Very dense, brown, poorly graded SAND (SP) with gravel mps, 1.5 in., no structure, no odor, dry -ICE CONTACT DEPOSITS-	8-10	12	20 45 20 17	SP	
10			Medium dense, brown, poorly graded SAND (SP) with gravel, mps 2.0 in., no structure, no odor, moist	10-12	10	7 10 10 17	SP	
			Very dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.5 in., no structure, no odor, wet.	12-14	12	27 53 46 58	SP-SM	
15			Dense, brown to grey, poorly graded GRAVEL (GP-GM) with silt and sand, mps 2.0 in., no structure, no odor, wet	14-16	8	8 20 15 16	GP-GM	
			Very dense, brown to tan, poorly graded SAND with gravel (SP), mps 2.0 in., no structure, no odor ,moist	16-18	9	22 41 16 14	SP	
			NO RECOVERY	18-20	NR	10 16 12 13	NR	
20			Dense, grey to brown, poorly graded SAND (SP) with gravel, mps 2.1 in., no structure, no odor, wet	20-22	7	13 16 17 23	SP	
			Medium dense, brown, poorly graded SAND (SP) with gravel, mps 0.6 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	22-24	8	12 19 10 10	SP	
25			Medium dense, brown, poorly graded SAND (SP) with gravel, mps 3.0 in., no structure, no odor, wet	24-26	2	8 14 10 10	SP	
			Medium dense, brown, poorly graded SAND (SP) with gravel, mps 1.5 in., no structure, no odor, wet	26-28	6	13 13 9 10	SP	
			Medium dense, brown to grey, poorly graded SAND (SP) with gravel, mps 1.0 in., no structure, no odor, wet	28-30	5	7 16 15 15	SP	
30			BOTTOM OF EXPLORATION AT 30.0 FT					

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-B104 — Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	16 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985793.729 E 677722.7619	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	161.53	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Applicable	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
0			Medium dense, brown to grey, poorly graded SAND (SP-SM) with silt, mps 0.5 in., no structure , no odor, moist -FILL-	0-2	17	8 11 11 15	SP-SM	
			Medium dense, grey to black, poorly graded SAND (SP-SM) with silt, mps <0.2 in., no structure , no odor, moist	2-4	20	11 11 14 14	SP-SM	
5			Medium dense, grey, poorly graded SAND (SP-SM) with silt, mps 2.0 in., no structure , no odor, moist	4-6	17	8 14 12 12	SP-SM	
			Loose, grey, poorly graded SAND (SP-SM) with silt, mps 1.5 in., no structure , no odor, moist	6-8	18	8 12 10 6	SP-SM	
			Medium dense, brown, poorly graded SAND (SP), mps 1.5 in., no structure, no odor, moist	8-10	6	9 7 7 8	SP	
10			Medium dense, brown to tan, poorly graded SAND (SP), mps 0.1 in., no structure, no odor, moist -ICE CONTACT DEPOSITS-	10-12	21	6 5 6 8	SP	
			Medium dense, brown, SILTY SAND (SM), mps <0.1 in., no structure, no odor, moist	12-14	15	14 15 15 18	SM	
15			Medium dense, tan, sandy SILT (ML), mps <1.0 mm, no structure, no odor, moist	14-16	15	5 10 10 13	ML	
			Dense, tan, sandy SILT (ML), mps <1.0 mm, no structure, no odor, moist	16-18	15	10 25 18 19	ML	
			Medium dense, tan to brown, sandy SILT (ML), mps<1.0 mm, no structure, no odor, wet, sand pocket	18-20	15	4 6 6 9	ML	
20			Loose, brown to tan, sandy SILT (ML), mps <1.0 mm no structure, no odor, wet	20-22	15	5 5 4 7	ML	
			Medium dense, brown to tan, sandy SILT (ML), mps <1.0 mm, no structure, no odor, wet	22-24	15	7 9 7 8	ML	
25			Loose, tan to brown, sandy SILT (ML), mps<1.0 mm, no structure, no odor, wet	24-26	16	3 3 2 5	ML	
			Loose, tan to brown, sandy SILT (ML), mps<1.0 mm, no structure, no odor, wet, sand lenses	26-28	12	10 7 3 3	ML	
			Loose, tan to brown, silty SAND (SM), mps<1.0 mm, no structure, no odor, wet	28-30	9	3 3 2 4	SM	
30			NO RECOVERY	30-32	NR	5 4 3 4	NR	
			NO RECOVERY				NR	

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-B104

Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	16 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985793.729 E 677722.7619	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	161.53	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Applicable	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
Loose, brown to tan, well graded SAND (SW-SM) with silt, mps <2.0 mm, no structure, no odor, wet	32-34	NR	5, 6, 5, 5	SW-SM	
Medium dense, brown to tan, silty SAND (SM) MPS 1.5 in., no structure, no odor, wet	34-36	10	5, 5, 1, 4	SM	
Very loose, brown to tan, silty SAND (SM) MPS 0.1 in., no structure, no odor, wet	36-38	9	9, 6, 5, 4	SM	
Loose, brown to tan, silty SAND (SM), mps <2.0 mm, no structure. no odor, wet	38-40	14	3, 2, 2, 2	SM	
Loose, brown to tan, silty SAND (SM), mps <2.0 mm, no structure, no odor, wet -ICE CONTACT DEPOSITS-	40-42	12	2, 3, 2, 4	SM	
Loose, brown to tan, silty SAND (SM), mps <2.0 mm, no structure, no odor, wet	42-44	15	2, 2, 3, 4	SM	
Loose, brown to tan, silty SAND (SM), mps <2.0 mm, no structure, no odor, wet	44-46	15	3, 4, 5, 7	SM	
Spoon refusal at 46.5 ft Medium dense, brown to tan silty SAND (SM), mps 0.7 in., no structure, no odor, wet	46-48	9	4, 4, 100/6"	SM	
Medium dense, brown, poorly graded SAND (SP-SC) with clay and gravel, mps 0.3 in., moderately bonded, no odor, wet	48-50	15	6, 13, 10, 11	SP-SC	
Medium dense, brown, poorly graded SAND (SP-SC) with clay and gravel, mps 1.6 in., moderately bonded, no odor, wet	50-52	6	19, 20, 29, 34	SP-SC	
Medium dense, brown to grey, poorly graded SAND (SP-SC) with clay and gravel, mps 1.5 in., moderately bonded, no odor, wet -GLACIAL TILL-	52-54	17	8, 17, 10, 14	SP-SM	
Very dense, brown to grey, poorly graded SAND (SP-SM) with silt and gravel, mps 1.5 in., well bonded, no odor, wet	54-56	15	8, 35, 28, 55	SP-SC	
Very dense, brown to grey, poorly graded SAND (SP-SM) with silt and gravel, mps 1.3 in. well bonded, no odor, wet	56-58	17	27, 34, 40, 82	SP-SM	
Dense, brown to grey, poorly graded SAND (SP-SM) with silt and gravel, mps 1.5 in. well bonded, no odor, wet -GLACIAL TILL-	58-60	6	6, 22, 28, 66	SP-SM	

BOTTOM OF EXPLORATION AT 60.0 FT

Depth, feet: 35, 40, 45, 50, 55, 60, 65

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-CMT-1 — Well ID: HA20-CMT-1

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	16 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985714.75 E 677779.6621	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	177.05	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	180.13	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden: Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallation Comments
0	0			Medium dense, brown, poorly graded SAND (SP), mps 1.5 in., no structure, no odor, dry	0-2	13	4 6 10 13	SP		Grout to grade	
				Medium dense, brown, poorly graded SAND (SP), mps 1.5 in., no structure, no odor, dry	2-4	14	7 7 6 7	SP			
5				Medium dense, brown, poorly graded SAND (SP), mps 1.5 in., no structure, no odor, dry	4-6	17	10 13 12 16	SP			
				Medium dense, brown, poorly graded SAND (SP), mps 1.5 in., no structure, no odor, dry	6-8	14	13 5 4 4	SP			
				Medium dense, brown, poorly graded SAND (SP), mps 1.5 in., no structure, no odor, dry	8-10	14	13 5 4 4	SP			
10				Medium dense,brown, poorly graded SAND (SP), mps 1.4 in., no structure, no odor, moist -ICE CONTACT DEPOSITS-	10-12	11	6 5 5 8	SP			
				Medium dense, poorly graded SAND (SP), mps 1.4 in., no structure, no odor, moist	12-14	7	8 9 7 6	SP			
15				Medium dense, brown, poorly graded SAND (SP), mps 0.7 in., no structure, no odor, wet	14-16	7	11 6 5 5	SP			
	5			Medium dense poorly graded SAND with gravel (SP), mps 0.5 in., no structure, no odor, wet	16-18	7	12 10 8 9	SP			
				NO RECOVERY	18-20	NR	13 41 9 9	NR			
20				Medium dense, brown, poorly graded SAND (SP) with gravel, mps 2.0 in., no structure, no odor, wet	20-22	7	15 12 7 8	SP			
				Medium dense, brown, poorly graded SAND (SP) with gravel, mps 2.0 in., no structure, no odor, wet	22-24	9	10 9 8 9	SP			
25				Medium dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure , no odor, wet	24-26	9	10 10 7 8	SP			
				NO RECOVERY	26-28	NR	17 16 9 11	NR			
				Medium dense, brown, poorly graded SAND (SP) with gravel, mps 1.5 in., no structure, no odor, wet	28-30	9	10 10 10 13	SP			
30				Dense, grey, poorly graded SAND (SP) with silt and gravel, mps 2.0 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	30-32	14	5 21 25 11	SP			
				Dense, brown, poorly graded SAND (SP), mps 1.3 in., no structure, no odor, wet				SP			

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-1

Well ID: HA20-CMT-1

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	16 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985714.75 E 677779.6621	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	177.05	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	180.13	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
					32-34	10	9 19 13 16				
35				Dense, brown, poorly graded SAND (SP), mps 1.5 in., no structure, no odor, wet	34-36	11	19 16 15 18	SP			
				Loose, brown, poorly graded SAND (SP), mps 1.0 in., no structure, no odor, wet	36-38	10	6 4 3 5	SP			
				Medium dense, brown, silty SAND (SM), mps 0.2 in., no structure, no odor, wet	38-40	10	9 7 7 6	SM			
40				Medium dense, brown, silty SAND (SM), mps 0.2 in., no structure, no odor, wet	40-42	10	7 8 6 9	SP			
				Medium dense, brown, silty SAND (SM), mps 0.2 in., no structure, no odor, wet	42-44	10	12 10 10 11	SP			
45				Dense, grey to brown, poorly graded SAND (SP) with gravel, mps 2.1 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	44-46	9	17 20 12 11	SP			bottom of grout 45.0 top of bentonite pellets 45.0
				Very dense, brown to grey, silty SAND (SM) with gravel, mps 0.9 in., no structure, no odor, wet	46-48	14	29 32 22 26	SM		Bentonite Pellets	
	15			Dense, grey to brown, poorly graded SAND (SP) with gravel, mps 1.0 in., no structure, no odor, wet	48-50	8	6 20 26 30	SP			
50				Dense, grey to brown, poorly graded SAND (SP) with gravel, mps 2.0 in., no structure, no odor, wet	50-52	8	15 36 19 24	SP			
				Dense, grey to brown, poorly graded SAND (SP) with gravel and silt, mps 1.3 in., no structure, no odor, wet	52-54	6	15 28 26 31	SP			bottom of bentonite pellets 52.0 top of sand 52.0
55				Dense, grey to brown, poorly graded SAND (SP) with gravel and silt, mps 1.5 in., no structure, no odor, wet	54-56	8	11 23 11 14	SP			
				Dense, grey to brown, poorly graded SAND (SP) with gravel and silt, mps 1.4 in., no structure, no odor, wet	56-58	6	14 20 28 19	SP		Top of Screen 55.9 Channel 1 56.0-56.3 Bottom of Screen 56.5 Bentonite Pellets	
				Dense, brown to dark brown, silty SAND (SM), mps 0.6 in., no structure no odor, wet	58-60	4	15 28 18 19	SM			
60				Very dense, grey to brown silty SAND (SP) with gravel, mps 1.0 in., no structure, no odor, wet	60-62	8	18 44 81 50/0.5"	SM			bottom of sand 60.0 top of bentonite pellets 60.0
				Very dense, grey, poorly graded GRAVEL (GP-GM) with silt and sand, mps 1.5 in., no structure, no odor, wet	62-64	4	12 36 100/6"	GP-GM			bottom of bentonite pellets 63.0 top of sand 63.0
65	20			Very dense, grey, poorly graded GRAVEL (GP) with sand, mps 2.1 in., no structure, no odor, wet -GLACIAL TILL-	64-66	3	50 28 100/5"	GP		Top of Screen 64.9 Channel 2 65.0-65.3 Bottom of Screen 65.4	
				Very dense, grey, poorly graded GRAVEL (GP) with sand, mps 2.1 in., no structure, no odor, wet	66-68	11	67 59	SM		Bentonite Pellets	bottom of sand 68.0

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-1 — Well ID: HA20-CMT-1

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	16 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985714.75 E 677779.6621	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	177.05	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	180.13	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden: Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
70				Very dense, grey to brown, silty SAND (SM), mps 1.5 in., moderately bonded, no odor, wet	68-70	5	55 58 9 38	SM			top of bentonite pellets 68.0
				Very dense, grey to brown, silty SAND (SM), mps 1 in., moderately bonded, no odor, wet	70-72	7	43 25 9 11	SM			bottom of bentonite pellets 70.7 top of sand 70.7
75				TOP OF ROCK AT 72.0 FT CASING SET AT 75.0 FT DRILLED ROCK TO 76.0 FT			13 26			Top of Screen 72.9 Channel 3 and 6 73.0-73.3 Bottom of Screen 73.4 Bentonite Pellets	
80				Very hard, fresh, grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to disintegrated, iron stained, occasionally limonite coated, tight to occasionally quartz healed. Secondary joints vertical, moderately close, smooth, planar to undulatory, commonly quartz healed, occasionally iron stained, tight. Weathered low angle joint	75-80	60/60		Recovery=100% RQD=78%			bottom of sand 77.0 top of bentonite pellets 77.0
85	25			Very hard, fresh, dark grey, medium to fine grained Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, smooth, planar, fresh, tight to commonly quartz healed. Secondary joints vertical, close to moderately close, smooth, planar to undulating, fresh, tight, commonly quartz healed, occasionally epidote coated or iron stained -ASSABET QUARTZ DIORITE-	80-85	60/60		Recovery=100% RQD=95%			bottom of bentonite pellets 83.0 top of sand 83.0
90				Very hard, fresh, dark grey, medium to fine grained Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, smooth, planar, fresh, tight to commonly quartz healed and occasionally iron stained. Secondary joints high angle, close to moderately close, smooth, planar to undulatory, fresh, tight, commonly quartz healed or epidote coated, commonly iron stained.	85-90	57/60		Recovery=95% RQD=93%		Top of Screen 85.9 Channel 5 86.0-86.3 Bottom of Screen 86.4 Bentonite Pellets	bottom of sand 88.0 top of bentonite pellets 88.0
95				Very hard, fresh, dark grey, medium to fine grained Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, smooth, planar, fresh, tight to commonly quartz healed and occasionally iron stained. Secondary joints high angle, close to moderately close, smooth, planar to undulatory, fresh, tight, commonly quartz healed or epidote, coated commonly iron stained.	90-94.8	54/58		Recovery=93% RQD=93%		Top of Screen 94.3 Channel 6 94.4-94.7 Bottom of Screen 94.8	bottom of bentonite pellets 91.0 top of sand 91.0 bottom of sand 94.8
100	30			BOTTOM OF EXPLORATION AT 94.8 FT							

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-2 Well ID: HA20-CMT-2

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	20 October 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985760.827 E 677653.9087	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.9	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	190.85	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
0	0			-TOPSOIL 1.0 IN.- Medium dense, brown to tan, silty SAND (SM), mps 1.0 in., no structure, no odor, dry, boot ma	0-2	18	3 7 10 6	SM		Grout to grade	
				Loose, brown to tan, silty SAND (SM), mps 1.0 in., no structure, no odor, dry	2-4	18	5 5 4 4	SM			
5				Loose, brown to tan, silty SAND (SM), mps 0.3 in., no structure, no odor, moist	4-6	13	5 4 4 3	SM			
				Loose, tan, silty SAND (SM), mps 0.8 in., no structure, no odor, dry	6-8	12	3 3 3 4	SM			
				Medium dense, tan, silty SAND (SM), mps 0.5 in., no structure, no odor, dry -FILL-	8-10	18	10 12 8 7	SM			
10				Medium dense, brown to tan, silty SAND (SM), mps 1.0 in. , no structure, no odor, moist	10-12	12	14 14 11 7	SM			
				Medium dense, brown to tan, silty SAND (SM), mps 1.0 in., no structure, no odor, moist	12-14	12	7 5 6 6	SM			
15				Medium dense, brown to tan, poorly graded SAND (SP), mps <1.0 mm, no structure, no odor, moist	14-16	6	8 11 11 9	SP			
	5			Medium dense, brown to tan, poorly graded SAND (SP), mps <1.0 mm, no structure, no odor, moist	16-18	12	5 6 7 7	SP			
				Medium dense, brown to tan, silty SAND (SM), mps <1.0 mm, no structure, no odor, moist	18-20	12	10 10 10 10	SM			
20				Medium dense, brown to tan, poorly graded SAND (SP), mps 1.0 in., no structure, no odor, moist	20-22	14	6 5 6 6	SP			
				Medium dense, brown to tan, poorly graded SAND (SP), mps 1.0 in., no structure, no odor, moist, ocassional silty sand pocket	22-24	12	7 7 10 12	SP			
25				Very stiff, brown to tan, elastic SILT (ML), mps <1.0 mm, no structure, no odor, moist	24-26	14	6 9 13 15	ML			
				Very stiff, brown to tan, elastic SILT (ML), mps <1.0 mm, no structure, no odor, moist -ICE CONTACT DEPOSITS-	26-28	14	6 11 11 15	ML			
				Very stiff, brown to tan, elastic SILT (ML), mps <1.0 mm, no structure, no odor, moist	28-30	13	12 13 12 15	ML			
30				Medium dense, brown to tan, silty SAND (SM), mps <1.0 mm, no structure, no odor, moist	30-32	17	8 11 14 19	SM			
				Medium dense, brown to tan, elastic SILT (ML), mps <1.0 mm, no structure, no odor, moist				ML			

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-2 Well ID: HA20-CMT-2

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	20 October 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985760.827 E 677653.9087	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.9	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	190.85	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallation Comments
					32-34	15					
35				Medium dense, brown to tan, elastic SILT (ML), mps <1.0 mm, no structure, no odor, moist	34-36	16	3 9 12 12	ML			
				Medium dense, brown to tan, elastic SILT (ML), mps <1.0 mm. no structure, no odor, moist	36-38	7	7 15 17 25	ML			
				Medium dense, light brown, elastic SILT (ML), mps <1.0 mm, no structure, no odor, moist 4.0 in. thick medium dense, tan, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, dry	38-40	13	4 6 12 7	ML SP			
40				Medium dense, light brown, elastic SILT (ML), mps <1.0 mm, no structure, no odor, moist, ocassional sand pocket, poorly graded	40-42	13	6 9 11 15	ML			
				Medium dense, light brown, elastic SILT (ML), mps <1.0 mm, no structure, no odor, moist, ocassional iron oxide	42-44	16	6 9 11 12	ML			bottom of grout 43.0
45				-ICE CONTACT DEPOSITS- Medium dense, light brown, poorly graded SAND (SP), mps <1.0 mm, no structure, no odor, moist	44-46	16	5 10 11 12	SP		Bentonite Pellets	
				Dense, light brown, well graded SAND (SW), mps 10.0 mm, no structure, no odor, moist	46-48	13	9 12 17 29	SW			
	15			Dense, brown to grey, well graded SAND (SW) with gravel, mps 0.5 in., no structure, no odor, wet	48-50	12	14 16 22 23	SW			
50				Dense, brown to grey, well graded SAND (SW) with gravel, mps 0.5 in., no structure, no odor, wet	50-52	9	13 19 17 6	SW			
				Medium dense, brown to light brown, well graded SAND (SW) with gravel, mps 0.3 in., no structure, no odor, wet.	52-54	10	13 26 16 10	SW			top of bentonite pellets 53.0
55				Medium dense, brown to light brown, well graded SAND (SW) with gravel, mps 0.3 in., no structure, no odor, wet	54-56	13	9 11 14 13	SW			
				Dense, light brown, well graded SAND (SW) with gravel, mps 12.0 mm, no structure, no odor, wet	56-58	12	9 11 9 9	SW			
				Medium dense, light brown, poorly graded SAND (SP), mps 10.0 mm, no structure, no odor, moist	58-60	12	9 16 15 10	SP			bottom of bentonite pellets 59.3 top of sand 59.3
60				NO RECOVERY	60-62	NR	10 14 11 9	NR		Top of Screen 61.4 Channel 4 and 1 61.5-61.8 Bottom of Screen 61.9	
				Medium dense, light brown, poorly graded SAND (SP), mps 10.0 mm, no structure, no odor, moist	62-64	14	15 20 18 17	SP		Bentonite Pellets	bottom of sand 63.9 top of bentonite pellets 63.9
65	20			NO RECOVERY	64-66	NR	7 9 12 13	NR			
				Very dense, brown to tan, silty SAND (SM) with gravel, mps 20.0 mm, weakly bonded, no odor, wet	66-68	13	15 15 14 13	SM			

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-2 Well ID: HA20-CMT-2

HALEY ALDRICH

Project No.: 131884-004	**Project Name:** NUCLEAR METALS INC.	**Location:** CONCORD, MA
Client: DE MAXIMIS, INC.	**Completion Date:** 20 October 2020	**Sampling Method:** S
Logged By: Amelia Midgley	**Site Datum:** MA ST PL NAD 1983*	**Well Material:** Polyethylene CMT Channel
Reviewed By: J. Bode/K. Alepidis	**Coordinates:** N 2985760.827 E 677653.9087	**Rig Type:** Track
Drilling Company: Cascade Drilling	**Ground Surface Elevation:** 187.9	**Casing Size:** 6
Drilling Method: Drive and Wash, Sonic	**Top PVC Casing Elevation:** 190.85	**Bit ID / OD:** 3.38/2.5/4
Driller: Oiden Gonzalez		**Bit Type / Size:** Cutting Head

Depth, feet	Depth, metres	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden: Unified Soil Classification	Borehole Backfill	CMT Well Insrallation Comments
		Very dense, brown to light brown, clayey SAND (SC) with gravel, mps 30.0 mm, moderate bonding, no odor, wet -GLACIAL TILL-	68-70	14	16 25 44 26	SC		
70		Very dense, brown to light brown, silty SAND (SM) with gravel, mps 16.0 mm, weakly bonded, no odor, wet	70-72	16	12 16 56 75	SM		
		Dense brown, clayey SAND (SC), mps 1.5 in., moderate to well bonding, no odor, wet	72-74	14	15 35 46 35	SC		
75		Dense, brown, silty SAND (SM), mps 1.0 in., moderately bonded, no odor, wet	74-76	12	12 13 30 52	SM		
		Dense, brown, silty SAND (SM), mps 1.0 in., weak moderate bonding, no odor, wet	76-78	20	3 17 25 19	SM		
80		Dense, brown, silty SAND (SM), mps 1.0 in., weak moderate bonding, no odor, wet	78-80	15	11 19 40 67	SM		
		Dense, brown, silty SAND (SM), mps 1.0 in., weak moderate bonding, no odor, wet	80-82	16	8 50 61 80	SM		
	25	Dense brown, clayey SAND (SC), mps 1.0 in., weak bonding, no odor, wet	82-84	16	10 21 31 67	SC		bottom of bentonite pellets 83.4 top of sand 83.4
85		Dense, brown, silty SAND (SM), mps 1.0 in., weak moderate bonding, no odor, wet	84-85.2	5	15 35 35 40	SM		bottom of sand 85.0 top of bentonite pellets 85.0
		TOP OF BEDROCK AT 85.5 FT SET CASING AT 90.5 FT			15 22 50/2"		Top of Screen 85.4 Channel 5 and 2 85.5-85.8 Bottom of Screen 85.9 Bentonite Pellets	bottom of bentonite pellets 89.4 top of sand 89.4
90		Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, moderately spaced, smooth, planar, fresh, tight. ASSABET QUARTZ DIORITE	90.5-92.3	22/22		Recovery=100% RQD=100%	Top of Screen 91.4 Channel 3 91.5-91.8 Bottom of Screen 91.9 Bentonite Pellets	
95		Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, moderately spaced, smooth, planar, fresh to discolored - light iron staining tight.	92.3-97.3	57/60		Recovery=95% RQD=83%		bottom of sand 93.9 top of bentonite pellets 93.9
100	30	Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, moderately spaced, smooth, planar, fresh, tight. ASSABET QUARTZ DIORITE	97.3-102.3	59/60		Recovery=98% RQD=92%		

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-2 Well ID: HA20-CMT-2

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	20 October 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985760.827 E 677653.9087	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.9	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	190.85	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden: Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
105				Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, close to moderately spaced, rough, planar, fresh, tight....*continued...* -APATITE QUARTZ INTRUSION-	102.3-107.3	60/60		Recovery=100% RQD=92%			
110					107.3-112	57/57		Recovery=100% RQD=100%			
115	35			Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, close to moderately spaced, rough, planar, fresh, tight. Stratum Change at 114.6 ft Acton/Andover Granite	112-117	55/60		Recovery=92% RQD=92%			
				Very hard, fresh, light grey, very coarse grained Acton Granite, massive. Primary joints low angle, close to moderate spacing. rough. planar, fresh to slightly discolored, occasionally healed tight. Rock mass shows some iron staining pervasive in the rock mass from weathering of biotite.							
				Very hard, fresh light grey, very coarse grained Acton Granite, massive. Primary joints low angle, close to moderate spacing, smooth to slickensided, planar, fresh to discolored, reaction halo, limonite coated one inch from joint surface. Tight to open.	117-120	36/36		Recovery=100% RQD=70%			
120				Very hard, fresh, light grey, very coarse grained Acton Granite, massive. Primary joints low angle, close to moderate spacing, smooth to slicken sided, planar, fresh to discolored, iron staining, tight to open. -ACTON/ANDOVER GRANITE-	120-124	48/48		Recovery=100% RQD=70%		Top of Screen 122.9 Channel 6 123.0-123.3 Bottom of Screen 123.4	bottom of bentonite pellets 120.9 top of sand 120.9
125				Very hard, fresh, light grey, very coarse grained Acton Granite, massive. Primary joints low angle, wide, smooth, planar, fresh to discolored, iron staining, tight.	124-127	36/36		Recovery=100% RQD=94%		Bentonite Pellets	bottom of sand 125.4 top of bentonite pellets 125.4
				Very hard, fresh, light grey, very coarse grained Acton Granite, massive. Primary joints low angle, wide, smooth, planar, fresh to discolored, iron staining, tight.	127-130.5	41/41		Recovery=100% RQD=100%			
130	40			Very hard, fresh light grey, very coarse grained Acton Granite, massive. Primary joints low angle, close, smooth, planar, discolored, iron staining, tight	130.5-135.5	60/60		Recovery=100% RQD=95%			bottom of bentonite pellets 133.4 top of sand 133.4
135				Very hard, fresh, light grey, very coarse grained Acton Granite, massive. Primary joints low angle, close, smooth, planar, discolored, iron staining, tight.	135.5-136.3	11/11		Recovery=100% RQD=100%		Top of Screen 135.4 Channel 7 Bottom of Screen 135.6	bottom of sand 135.6

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report
Borehole Log ID: HA20-CMT-2 Well ID: HA20-CMT-2

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	20 October 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985760.827 E 677653.9087	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.9	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	190.85	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden: Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
				BOTTOM OF EXPLORATION AT 136.3 FT							
140											
145											
	45										
150											
155											
160											
	50										
165											
170											

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-CMT-3 Well ID: HA20-CMT-3

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	12 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985853.904 E 677666.3042	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	181.64	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.65	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Borehole Backfill
0	0	Medium dense, grey brown, silty SAND (SM), mps 0.6 ft, no structure, no odor, moist, 0.2 ft bituminous concrete at ground surface	0-2	12	17 6 6 4	SM	Grout to grade
		Loose, brown, poorly graded SAND (SP), mps 0.05 in., no structure, no odor, moist	2-4	16	4 2 4 2	SP	
5		Loose, grey and brown banded, poorly graded SAND (SP), mps 0.25 in., no structure, no odor, moist	4-6	18	3 3 3 1	SP	
		Loose, brown, poorly graded SAND (SP), mps 0.3 in., no structure, no odor, moist -FILL-	6-8	19	7 3 3 2	SP	
		Very loose, brown, poorly graded SAND (SP), mps 0.3 in., no structure, no odor, moist	8-10	9	WOH/24	SP	
10		Very loose, brown, poorly graded SAND (SP), mps 0.10 in., no structure, no odor	10-12	23	2 1 1 1	SP	
		Loose, light brown to grey, silty SAND (SM), mps 0.1 in., no structure,no odor, moist Stratum Change at 14.0 ft Top Of Natural Soils	12-14	10	3 3 4 7	SP	
15	5	Medium dense, light brown to tan grey, poorly graded SAND (SP) and SILT (ML), mps 0.05 in., interbedded band of poorly graded SAND and SILT (ML) up to 2.0 in. thick, no odor, moist	14-16	16	8 9 9 10	SP/ML	
		Medium dense, grey, SILT (ML), mps 0.01 in., no structure, no odor, moist	16-18	12	9 10 11 12	ML	
		Medium dense, light brown and grey banded, interbedded poorly graded SAND (SP) and SILT (ML), mps 0.05 in., no structure, no odor, moist	18-20	17	6 11 11 10	SP/ML	
20		Medium dense, tan, SILT (ML), mps 0.01 in., no structure, no odor, moist	20-22	16	11 11 16 15	ML	
		Medium dense, tan, SILT (ML), mps 0.01 in., no structure, no odor, moist -ICE CONTACT DEPOSITS-	22-24	12	11 12 12 9	ML	
25		Medium dense, brown with red brown bands, poorly graded SAND (SP), mps 0.10 in., occasional interbedded of silt up to 1.0 in. thick, two iron stained band up to 1.0 in. thick, no odor, moist	24-26	14	6 9 12 13	SP	
		Medium dense, tan, poorly graded SAND (SP), mps 0.10 in., increasing grain size with depth, no odor, moist	26-28	16	8 14 12 15	SP	
		Dense, light brown, well graded SAND (SW), mps 0.2 in., no structure, no odor, moist	28-30	12	12 19 18 13	SW	
30		Medium dense, brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, moist	30-32	16	13 14 15 15	SW	
		Dense, grey brown, well graded SAND with gravel (SW), mps 1.2 in., no structure no odor, moist			35	SW	

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_IW1CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-3 Well ID: HA20-CMT-3

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	12 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985853.904 E 677666.3042	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	181.64	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.65	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Borehole Backfill	CMT Well Insrallarion Comments
			32-34	9	23, 19, 18			
35		Dense, grey brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, moist	34-36	10	18, 18, 29, 16	SW		
		Dense, grey brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, moist	36-38	10	16, 20, 17, 19	SW		
		Dense, tan, poorly graded SAND (SP), mps 0.05 in., no structure, no odor, moist	38-40	11	11, 28, 19, 18	SP		
40		Dense, tan, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	40-42	8	14, 27, 18, 24	SP		
		Dense, tan with grey bands, poorly graded SAND with gravel (SP), mps 0.5 in., no structure, no odor, moist	42-44	7	18, 22, 22, 21	SP		
45		-ICE CONTACT DEPOSITS- Dense, tan with grey bands, poorly graded SAND (SP), mps 0.05 in., no structure no odor, moist	44-46	9	41, 24, 16, 13	SP	Bentonite Pellets	bottom of grout 45.0; top of bentonite pellets 45.0
		Dense, grey brown, well grained SAND with gravel (SW), mps 0.8 in., no structure, no odor, moist	46-48	9	21, 19, 17, 13	SW		
50	15	Dense, light brown, poorly graded SAND (SP), mps 0.3 in., no structure, no odor, moist	48-50	11	20, 20, 13, 11	SP		
		Medium dense, brown, poorly graded SAND (SP), mps 0.1 in., no structure, no odor, wet	50-52	0	5, 6, 7, 7	SP		
		Medium dense, light brown, poorly graded SAND (SP), mps 0.1 in., no structure, no odor, wet	52-54	0	15, 9, 12, 13	SP		
55		NO RECOVERY	54-56	0	24, 26, 26, 50	NR		bottom of bentonite pellets 55.9; top of sand 55.9
		Dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet	56-58	9	12, 22, 14, 16	SP	Top of Screen 57.9	
		Dense, grey to grey brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, wet	58-60	6	20, 24, 14, 12	SW	Channel 1 58.0-58.3; Bottom of Screen 58.4; Bentonite Pellets	
60		Dense, brown, well graded SAND with gravel (SW), mps 0.6 in., no structure, no odor, wet	60-62	16	15, 22, 12, 8	SW		bottom of sand 60.9; top of bentonite pellets 60.9
		Dense, light brown, poorly graded SAND (SP), mps 0.2 in., no structure, no odor, wet	62-64	2	27, 28, 13, 10	SP		
65	20	Medium dense, light brown, poorly graded SAND (SP), mps, 0.10 in., no structure, no odor, wet	64-66	4	12, 18, 11, 12	SP		
		Medium dense, light brown, poorly graded SAND (SP), mps 0.01 in., no structure, no odor, wet	66-68	9	18	SP		

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-3 Well ID: HA20-CMT-3

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	12 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985853.904 E 677666.3042	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	181.64	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.65	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Well Configuration	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
				Very dense, light brown, poorly graded SAND with gravel (SP), mps 1.2 in., no structure, no odor, wet Stratum change at 70.0 ft top of FLOW TILL	68-70	4	14 15 18	SP				
70				Very dense, grey, silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, moist -FLOW TILL-	70-72	2	54 30 47 39	SM				
				Dense, light brown, silty SAND with gravel (SM), mps 1.2 in., no structure, no odor, moist	72-74	12	4 7 90 38	SM				
75				Dense, light brown to tan, silty SAND with gravel (SM), mps 1.0 in., weakly bonded in pockets, no odor, moist Stratum change at 76.0 ft top of GLACIAL TILL	74-76	12	12 26 22 35	SM				
				Very dense, olive grey, silty SAND with gravel (SM), mps 1.2 in., moderately bonded in pockets, no odor moist -GLACIAL TILL-	76-78	8	10 22 26 52	SM				
				Dense, grey brown, silty SAND with gravel (SM), mps 1.0 in., moderately to weakly bonded, no odor, moist	78-80	6	40 42 32 67	SM				
80				Very dense, grey, silty SAND with gravel (SM), mps 1.0 in., moderately bonded, no odor, moist Note: Cored 100.0 ft to 103.5 ft water return failed and core barrel melted. No recovered rock. Redrilled to 104.0 ft recovering fused metal and rock of old core barrel. Started new core run at 104.0 ft.	80-82	4	19 15 19 59	SM				
	25			NO RECOVERY	82-84	NR	8 20 51 59					bottom of bentonite pellets 82.5 top of sand 82.5
85				Dense, grey brown, silty SAND with gravel (SM), mps 1.2 in., moderately bonded, no odor, moist	84-86	8	8 17 47 84	SM			Top of Screen 84.9 Channel 2 85.0-85.3 Bottom of Screen 85.4	
				Dense, grey brown, silty SAND with gravel (SM), mps 1.0 in., moderately bonded, no odor, moist	86-88	3	6 12 21 42	SM			Bentonite Pellets	bottom of sand 87.5 top of bentonite pellets 87.5
				Medium dense, grey brown, silty SAND with gravel (SM), mps 1.0 in., moderately to weakly bonded, no odor, moist	88-90	NR	12 15 21 17	SM				
90				NO RECOVERY	90-92	0	10 12 13 43					
				Very dense, grey brown silty SAND with gravel (SM), mps 1.0 in.	92-94	16	12 23 66 97	SM				
95				Very dense, grey brown, silty SAND with gravel (SM), mps 1.0 in., moderately to well bonded, no odor, moist	94-95.3 95.3-96.6	4 4	9 27 60 114	SM				
	30			Very dense, black to dark grey, poorly graded GRAVEL (GP), mps 1.2 ft, no structure no.odor, moist TOP OF BEDROCK AT 96.5 FT Advance sample barrel to 100.0 ft to confirm			9 9 100/3" 30 100/0"	GP				
100				Attempted rock core but inner barrel seized, fusing together . Recovered fused barrel then advanced new barrel and bit to 104.0 ft coring rock and steel left in boring. ASSABET QUARTZ DIORITE-	100-104	42/48		Recovery=88% RQD=58%			Top of Screen 101.9 Channel 3 and 6 102.0-102.3 Bottom of Screen 102.4	bottom of bentonite pellets 99.9 top of sand 99.9

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-3 — Well ID: HA20-CMT-3

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	12 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985853.904 E 677666.3042	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	181.64	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.65	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Well Configuration	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
105				Very hard, fresh, grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to iron stained occasionally limonite coated right to occasionally quartz healed. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, occasionally iron stained, tight.							Bentonite Pellets	bottom of sand 104.4 top of bentonite pellets 104.4
110				Very hard, fresh, grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar fresh to iron stained occasionally limonite coated right to occasionally quartz healed. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, occasionally iron stained, tight.	108-112.3	48/52		Recovery=92% RQD=73%				bottom of bentonite pellets 111.9 top of sand 111.9
115	35			Very hard, fresh, light grey with white and dark grey mottling, very coarse grained Andover Granite, massive. Primary joints moderate angle, closely spaced rough, planar, iron stained, tight to open, commonly coated with limonite. Secondary joints high angle, close to extremely close en-echelon, rough, planar, tight to open, iron stained to occasionally coated with limonite at intersection with J1. Zenoliths of Assabet Quartz Diorite as inclusions in rock mass. -ACTON/ANDOVER GRANITE-	112.3-117.3	60/60		Recovery=100% RQD=92%			Top of Screen 112.9 Channel 4 113.0-113.3 Bottom of Screen 113.4 Bentonite Pellets	bottom of sand 116.4 top of bentonite pellets 116.4
					117.3-118.5							
120				Sonic core 118.5 ft to 124.0 ft to clear metal obstructions and fragments left from broken core barrel. Recovered rock is Andover Granite. Occasional trace of iron staining on low angle joints. Resume coring after reaming hole to 4.0 ft with barrel. -ACTON/ANDOVER GRANITE-							Top of Screen 123.9 Channel 5 124.0-124.3 Bottom of Screen 124.4	bottom of bentonite pellets 121.9 top of sand 121.9
125				Very hard, fresh, light grey changing to dark grey very coarse to medium grained Andover Granite and Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, rough planar, fresh, tight to commonly quartz healed and occasionally aplite intruded. Secondary joints high angle, close to moderately close, rough, planar, fresh, tight, commonly quartz healed.	125-127.5	30/30		Recovery=100% RQD=100%			Bentonite Pellets	bottom of sand 126.4 top of bentonite pellets 126.4
130	40			Very hard, fresh, light grey changing to dark grey very coarse to medium grained Andover Granite and Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, rough, planar, fresh, tight to commonly quartz healed and occasionally aplite intruded. Secondary joints high angle, close to moderately lose, rough, planar, fresh, tight, commonly quartz healed. -ACTON/ANDOVER GRANITE-	127.5-132.5	60/60		Recovery=100% RQD=100%				
135				Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to healed or intruded with quartz, occasionally iron stained. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight.	132.5-136.5	48/48		Recovery=100% RQD=98%				
					136.5-138.1	19/19		Recovery=100% RQD=100%				

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_IW1CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-3 Well ID: HA20-CMT-3

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	12 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985853.904 E 677666.3042	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	181.64	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.65	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Well Configuration	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
140				Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to healed or intruded with Aplite. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight.	138.1-142	47/47		Recovery=100% RQD=100%				
145				Very hard, fresh, light grey changing to dark grey very coarse to medium grained Andover Granite and Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, rough, planar, fresh, tight to commonly quartz healed and occasionally aplite intruded. Secondary joints high angle, close to moderately lose, rough, planar, fresh, tight, commonly quartz healed....*continued...*	142-145	60/60		Recovery=100% RQD=100%			Top of Screen 145.4 Channel 7 145.5-145.7 Bottom of Screen 145.7	bottom of bentonite pellets 142.3 top of sand 142.3; bottom of sand 145.7
	45			Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to healed or intruded with Aplite. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight. -ASSABET QUARTZ DIORITE- Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to healed or intruded with Aplite. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight.								
150				BOTTOM OF EXPLORATION AT 147.0 FT								
155												
160												
	50											
165												
170												

Report: H&A-NMI LOG_IW1CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-4   Well ID: HA20-CMT-4

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	11 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985929.262 E 677779.7947	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	173.94	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	176.86	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden: Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
0	0			NO RECOVERY, TRACE WOOD FIBERS	0-2	NR	15 64 27 23			Grout to grade	
				Loose, brown, silty SAND (SM), mps < 4.0 mm, no structure, no odor, wet	2-4	2	7 5 4 4	SM			
5				NO RECOVERY	4-6	0	4 3 2 4				
				Loose, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	6-8	7	4 4 3 5	SP			
				Loose, brown, poorly graded SAND (SP), mps 2.0 in., no structure no odor moist	8-10	8	3 5 5 5	SP			
10				Loose, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	10-12	17	5 7 5 7	SP			
				Loose, brown, poorly graded SAND (SP), mps 1.5 in., no structure, no odor, moist	12-14	13	6 6 4 5	SP			
15				Medium dense, brown, poorly graded SAND (SP), mps 2.0 in., no structure, no odor, moist -ICE CONTACT DEPOSITS-	14-16	4	18 13 8 7	SP			
	5			Medium dense, brown, poorly graded SAND (SP), mps 1.2 in., no structure, no odor, moist	16-18	12	10 18 11 9	SP			
				Medium dense, brown, poorly graded SAND (SP), mps 1.0 in., no structure, no odor, moist	18-20	11	15 8 5 9	SP			
20				Medium dense, brown, poorly graded SAND (SP), mps 1.5 in., no structure, no odor, moist	20-22	9	13 12 8 8	SP			
				Medium dense, brown, poorly graded SAND (SP), mps 1.1 in., no structure, no odor, moist	22-24	11	12 11 8 11	SP			
25				Medium dense, brown, poorly graded SAND (SP) with gravel, mps 0.5 in., no structure, no odor, moist	24-26	11	6 5 6 7	SP			
				NO RECOVERY	26-28	NR	7 7 7 9				
				Medium dense, brown, poorly graded SAND (SP) with gravel, mps 1.3 in., no structure, no odor, moist -ICE CONTACT DEPOSITS-	28-30	9	6 7 6 9	SP			
30				Medium dense, brown, poorly graded SAND (SP) with gravel, mps 1.4 in., no structure, no odor, moist	30-32	10	11 8 8 10	SP			
				Medium dense, brown, poorly graded SAND (SP) with SILT, mps 1.7 in., no structure, no odor, wet				SP			

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-4

Well ID: HA20-CMT-4

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	11 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985929.262 E 677779.7947	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	173.94	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	176.86	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
					32-34	11					
35				Medium dense, brown, poorly graded SAND(SP), mps 2.0 in., no structure, no odor, wet	34-36	11	11, 10, 8, 11	SP			
				Medium dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet	36-38	11	9, 11, 9, 12	SP			
				Medium dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet	38-40	10	15, 12, 11, 12	SP			
40				Medium dense, brown, poorly graded SAND (SP), mps <4.0 mm, no structure, no odor, wet	40-42	10	8, 7, 6, 8	SP			
				Medium dense, brown, poorly graded SAND (SP), mps <4.0 mm, no structure, no odor, wet	42-44	11	8, 9, 7, 9	SP			
45				Loose, brown, poorly graded SAND (SP) with silt, mps 1.5 in., no structure, no odor -ICE CONTACT DEPOSITS-	44-46	12	7, 7, 7, 7	SP			
				Medium dense, brown, poorly graded SAND (SP) with gravel, mps 0.5 in., no structure no odor wet	46-48	9	4, 4, 3, 3	SP		Bentonite Pellets	bottom of grout 46.0 top of bentonite pellets 46.0
	15			Medium dense, brown, poorly graded SAND (SP) with gravel, mps 0.5 in., no structure, no odor, wet	48-50	10	23, 11, 6, 4	SP			
50				NO RECOVERY	50-52	NR	9, 7, 6, 7				
				Medium dense, brown, poorly graded SAND (SP) with gravel, mps 2.0 in., no structure, no odor, wet	52-54	8	7, 4, 5, 7	SP			
55				Medium dense, brown, poorly graded SAND (SP) with gravel mps, 1.5 in., no structure, no odor, wet	54-56	8	8, 16, 7, 7	SP			
				Medium dense, brown, poorly graded SAND (SP) with gravel, mps 1.2 in., no structure, no odor, wet	56-58	7	12, 14, 9, 9	SP			
				Medium dense, red brown, poorly graded SAND (SP), mps <6.0 mm, no structure, no odor, wet	58-60	11	15, 12, 8, 12	SP			bottom of bentonite pellets 58.0 top of sand 58.0
60				Loose, brown, poorly graded SAND (SP) with silt, mps <6.0 mm, no structure, no odor, wet	60-62	14	8, 9, 9, 10	SP			
				Medium dense, brown, silty SAND (SM), mps 1.3 in., no structure, no. odor, wet	62-64	14	4, 5, 4, 5	SM		Top of Screen 61.9 Channel 1 62.0-62.3 Bottom of Screen 62.4	
65	20			Medium dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet	64-66	14	12, 11, 8, 11	SP		Bentonite Pellets	
				Medium dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	66-68	7	10, 13, 12, 17	SP			bottom of sand 67.0 top of bentonite pellets 67.0

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-4 Well ID: HA20-CMT-4

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	11 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985929.262 E 677779.7947	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	173.94	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	176.86	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden: Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
				Dense, brown, well graded SAND (SW), mps 0.3 in., no structure, no odor, wet	68-70	8	10 0 8 13	SW			
70				NO RECOVERY	70-72	NR	14 20 14 17				
				Medium dense, brown, silty SAND (SM), mps <1.0 mm, no structure, no odor, wet	72-74	15	23 18 15 15	SM			
75				Dense, grey, silty SAND (SM), mps 1.0 in., well bonded, no odor, wet -GLACIAL TILL-	74-76	17	12 13 14 19	SM			bottom of bentonite pellets 75.0 top of sand 75.0
				Medium dense, grey, silty SAND (SM), mps 1.0 in., well bonded, no odor, wet	76-78	13	9 18 22 34	SM			
				Similar to above	78-80	6	5 11 10 15			Top of Screen 78.9 Channel 2 79.0-79.3 Bottom of Screen 79.4	
80				Similar to above -GLACIAL TILL-	80-82	4	8 11 10 15			Bentonite Pellets	
	25			Dense, grey, silty SAND (SM), mps 1.0 in., well bonded, no odor, wet	82-84	5	7 11 12 18	SM			bottom of sand 84.0 top of bentonite pellets 84.0
85				Medium dense, grey, silty SAND (SM), mps 1.5 in., well bonded, no odor, wet	84-86	13	11 8 27 12	SM			
				NO RECOVERY	86-88	NR	11 8 13 30	NR			
				TOP OF ROCK AT 88.0 FT			28 20 45 100/6"				bottom of bentonite pellets 88.0 top of sand 88.0
90				Very hard, fresh, grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to iron stained occasionally limonite coated right to occasionally quartz healed. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, occasionally iron stained, tight. -ASSABET QUARTZ DIORITE-	90-95	60/60		Recovery=100% RQD=97%		Top of Screen 90.9 Channel 3 and 6 91.0-91.3 Bottom of Screen 91.4 Bentonite Pellets	
95	30			Very hard, fresh, dark grey, medium to fine grained Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, rough, planar, fresh, tight to commonly quartz healed. Secondary joints high angle, close to moderately close, rough, planar, fresh, tight, commonly quartz healed.	95-100	58/60		Recovery=97% RQD=90%			bottom of sand 95.0 top of bentonite pellets 95.0
100				Very hard, fresh, dark grey, medium to fine grained Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, rough, planar, fresh, tight to commonly quartz healed and occasionally aplite intruded. Secondary joints high	100-105	60/60		Recovery=100% RQD=93%			bottom of bentonite pellets 100.0 top of sand0100.0

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-4 Well ID: HA20-CMT-4

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	11 December 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Polyethylene CMT Channel
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985929.262 E 677779.7947	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	173.94	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	176.86	**Bit ID / OD:**	3.38/2.5/4
Driller:	Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Overburden Unified Soil Classification	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
				angle, close to moderately lose, rough, planar, fresh, tight, commonly quartz healed. -ASSABET QUARTZ DIORITE-						Top of Screen 102.9 Channel 4 103.0-103.3 Bottom of Screen 103.4	
105				Moderately hard to soft, slightly to completely weathered, dark grey, medium to fine grained Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, rough, planar, decomposed to disintegrated, tight to open. Secondary joints high angle, close to moderately close, rough, planar, decomposed to disintegrated, tight to open, commonly iron stained and limonite coated. Friable.	105-110	60/60				Bentonite Pellets	bottom of sand 106.0 top of bentonite pellets0106.0 bottom of bentonite pellets 109.0 top of sand
110				Very hard, slightly weathered to fresh, dark grey, medium to fine grained Assabet Quartz Diorite, massive. Primary joins low angle, close to moderately spaced, rough, planar, fresh, tight to commonly quartz healed and occasionally aplite intruded. Secondary joints high angle, close to moderately close, rough, planar, fresh, tight, commonly quartz healed.	110-114					Top of Screen 110.9 Channel 5 111.0-111.3 Bottom of Screen 111.4 Bentonite Pellets Top of Screen 113.0 Channel 7 Bottom of Screen 113.2	bottom of sand 113.6
				BOTTOM OF EXPLORATION AT 114.0 FT							
115	35										
120											
125											
130	40										
135											

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-5 Well ID: HA20-CMT-5

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	6 January 2021	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Sch. 40 PVC
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985880.983 E 677820.574	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	173.45	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	176.64	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Well Configuration	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
0	0			Medium dense, olive brown to brown, poorly graded SAND w/ gravel (SP), mps 1.0 in., no structure, no odor, moist -FILL-	0-2	13	5 14 11 12	SP			Grout to grade	
				Dense, light brown, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, moist	2-4	7	9 14 17 13	SW				
5				Medium dense, light brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, dry. -ICE CONTACT DEPOSITS-	4-6	8	8 11 12 13	SW				
				Medium dense, light brown to olive brown, well graded SAND with gravel (SW), mps 0.8 in., no structure, no odor, moist	6-8	10	9 11 8 8	SW				
				Medium dense, light brown to olive brown, well graded SAND with gravel (SW), mps 0.8 in., no structure, no odor, moist	8-10	8	4 7 9 19	SW				
10				Very dense, olive brown, silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, moist	10-12	6	5 76 22 30	SM				
				Very dense, grey to olive grey well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, moist	12-14	6	32 73 35 23	SW				
15				Very dense, grey to olive grey, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, moist	14-16	5	6 7 5 7	SW				
	5			Loose, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	16-18	10	5 5 5 6	SP				
				Medium dense, light brown, poorly graded SAND (SP), mps 0.3 in., no structure, no odor, moist	18-20	13	7 5 6 8	SP				
20				Loose, light brown to tan, poorly graded SAND (SP), mps 0.05 in., frequent layers of silt up to 0.75 in. thick, no odor, moist	20-22	11	5 5 5 6	SP				
				Medium dense, light brown, well graded SAND (SW), mps 0.1 in., no structure, no odor, moist -ICE CONTACT DEPOSITS-	22-24	13	4 13 9 12	SW				
25				Medium dense, light brown, poorly graded SAND (SP), mps 0.1 in., no structure, no odor, moist	24-26	4	18 12 9 7	SP				
				NO RECOVERY	26-28	9	10 7 5 7					
					28-30	NR	5 7 6 7	NR				
30				Medium dense, light brown, poorly graded SAND (SP), mps 0.1 in., no structure, no odor, wet	30-32	9	6 6 7 9	SP				
				Medium dense, brown, well graded SAND with gravel (SW), mps 1.2 in., no structure no odor, wet				SW				

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_IW1CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-5 Well ID: HA20-CMT-5

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	6 January 2021	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Sch. 40 PVC
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985880.983 E 677820.574	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	173.45	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	176.64	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Well Configuration	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
35				Medium dense, grey brown, well graded SAND with gravel (SW), mps 1.0 in.,no structure, no odor, moist	34-36	7	7 8 9 13	SW				bottom of grout 35.0 top of bentonite pellets35.0
				Medium dense, grey brown with red brown layers, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, moist	36-38	7	14 14 15 30	SW			Bentonite Pellets	
				Medium dense, red brown, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, wet	38-40	7	6 10 20 13	SW				
40				Medium dense, olive brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet	40-42	10	9 7 7 9	SP				bottom of bentonite pellets 40.0 top of sand 40.0
				Medium dense, olive brown to olive grey, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, wet	42-44	8	17 16 10 20	SW				
45				Dense, olive grey to grey, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, wet	44-46	5	28 19 24 13	SW			Top of Screen 44.9 Channel 1 45.0-45.3 Bottom of Screen 45.4	
				Dense, olive grey with light brown band,well graded SAND with gravel (SW), mps 1.2 in., no structure no odor wet	46-48	10	17 31 16 10	SW			Bentonite Pellets	
	15			Dense, grey, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, wet	48-50	4	10 21 14 17	SW				
50				Very dense, brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, wet	50-52	14	17 23 38 47	SW				bottom of sand 50.0 top of bentonite pellets 50.0
				Very dense, dark brown, well graded SAND with gravel (SW), mps 0.8 in., no structure, no odor, moist	52-54	10	65 44 41 59	SW				
55				Medium dense, tan, poorly graded SAND with gravel (SP), mps 1.2 in., no structure, no odor, wet	54-56	1	101 18 9 14	SP				
				Very dense, brown to olive brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, wet	56-58	10	8 29 28 26	SW				
				Dense, tan to light grey brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, wet	58-60	6	18 26 16 24	SW				
60				Very dense, grey brown, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, wet	60-62	9	24 62 32 31	SW				bottom of bentonite pellets 60.0 top of sand 60.0
				Very dense, brown, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, wet	62-64	7	12 14 35 33	SW				
65	20			Dense, grey brown, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, wet	64-66	8	4 17 27 23	SW			Top of Screen 64.9 Channel 2 65.0-65.3 Bottom of Screen 65.4	
				Dense, grey brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, wet	66-68	9	5 21	SW			Bentonite Pellets	bottom of sand 68.0

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_IW1CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

![HALEY ALDRICH]

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-5 Well ID: HA20-CMT-5

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	6 January 2021	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Sch. 40 PVC
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985880.983 E 677820.574	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	173.45	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	176.64	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Well Configuration	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
				Dense, light brown, well graded SAND with gravel (SW), mps 0.8 in., no structure, no odor, wet	68-70	11	24 28 17 22	SW				top of bentonite pellets 68.0
70				Stratum change at 70.0 in. Top of FLOW TILL								
				Very dense, grey brown, well graded SAND (SW), mps 0.8 in., no structure, no odor, wet	70-72	11	19 25 17 32					bottom of bentonite pellets70.6 top of sand 70.6
				Very dense, grey brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, wet -FLOW TILL-	72-74	12	90 50 21 58	SM SM			Top of Screen 72.9 Channel 3 73.0-73.3 Bottom of Screen 73.4	
75				Very dense, brown to grey brown, well graded SAND with gravel (SW), mps 0.8 in., no structure, no odor, wet	74-76	9	39 27 18 32	SW			Bentonite Pellets	bottom of sand 76.0 top of bentonite pellets 76.0
				Very dense, brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, wet -GLACIAL TILL-	76-78	8	29 17 9 30	SM				
				TOP OF BEDROCK AT 77.8 FT			45 100/3"					bottom of bentonite pellets 79.0 top of sand 79.0
80				Advanced sample barrel at 80.0 in. will set 7.0 in. and PW casing to 80.0 starting coring rock at 80.0 in.	80-81							
	25			Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to healed or intruded with quartz. Secondary joints high angle, moderately close, smooth, planar, fresh to quartz healed, tight. -ASSABET QUARTZ DIORITE-	81-85	55/60		Recovery=92% RQD=92%			Top of Screen 81.9 Channel 4 82.0-82.3 Bottom of Screen 82.5 Bentonite Pellets	
85				Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to healed or intruded with quartz. Secondary joints high angle, moderately close, smooth, planar, fresh to quartz healed, tight.	85-90	48/48		Recovery=100% RQD=100%				bottom of sand 86.0 top of bentonite pellets 86.0 bottom of bentonite pellets 89.0 top of sand 89.0
90				Very hard, fresh dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth planar fresh to healed and commonly epidote coated. Secondary joints high angle, moderately close, smooth, planar, fresh to discolored with iron staining, tight, commonly epidote coated.	89-94	60/60		Recovery=100% RQD=93%			Top of Screen 91.9 Channel 5 92.0-92.3 Bottom of Screen 92.4 Bentonite Pellets	
95	30			Very hard, fresh, dark grey with white spots medium grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to healed or intruded with quartz, tight. Secondary joints high angle, moderately close, smooth, planar, fresh to discolored with iron staining, tight, commonly epidote coated. Mineralization includes pyrite throughout rock mass, after biotite.	94-99	60/60		Recovery=100% RQD=98%				bottom of sand 97.0 top of bentonite pellets 97.0
100				Very hard, fresh, grey and white specked medium grained ASSABET QUARTZ DIORITE, massive. Primary joints low angle, moderately close, smooth, planar, fresh, quartz healed. Secondary joints high angle, moderately spaced, smooth, planar, fresh, tight, poorly developed and occasionally epidote coated.	99-104	59/59		Recovery=100% RQD=100%				

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_IW1CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-5   Well ID: HA20-CMT-5

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	6 January 2021	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Sch. 40 PVC
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985880.983 E 677820.574	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	173.45	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	176.64	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Well Configuration	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
105				TOP OF BEDROCK AT 77.8 FT Advanced sample barrel at 80.0 in. will set 7.0 in. and PW casing to 80.0 starting coring rock at 80.0 in....*continued...* Very hard, fresh, grey and white specked medium grained ASSABET QUARTZ DIORITE, massive. Primary joints low angle, moderately close, smooth, planar, fresh, quartz healed. Secondary joints high angle, moderately spaced, smooth, planar, fresh, tight, poorly developed and occasionally epidote coated.	104-108	48/48		Recovery=100% RQD=100%				
110				-ASSABET QUARTZ DIORITE- Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to occasionally iron stained healed or intruded with quartz. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight.	108-112	52/54		Recovery=100% RQD=98%				bottom of bentonite pellets 113.0 top of sand 113.0
115	35			Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, plana,r fresh to occasionally iron stained healed or intruded with quartz. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight.	112-116.5 112.7-117.6	52/54 59/59		Recovery=96% RQD=93% Recovery=100% RQD=80%			Top of Screen 116.9 Channel 6 117.0-117.3 Bottom of Screen 117.4	
120				Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to occasionally iron stained healed or intruded with quartz. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight.	116.5-120.3 120.3-122.7	46/46 29/29		Recovery=100% RQD=90% Recovery=100% RQD=100%			Bentonite Pellets	bottom of sand 122.0 top of bentonite pellets 122.0
125				Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to occasionally disintegrated and or iron stained, occasionally intruded with quartz. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight.								bottom of bentonite pellets 125.0 top of sand 125.0
130				Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to occasionally disintegrated and or iron stained, occasionally intruded with quartz. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight.	127.6-130.4	34/34		Recovery=100% RQD=100%			Top of Screen 129.4 Channel 7 129.4-129.6 Bottom of Screen 129.6	bottom of sand 129.6
	40			-ASSABET QUARTZ DIORITE- Very hard, fresh, dark grey with white spots medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to occasionally iron stained healed or intruded with quartz. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, tight.								
135				BOTTOM OF EXPLORATION AT 130.4 FT								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_IW1CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-CMT-6 Well ID: HA20-CMT-6

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	3 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley/ D. M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Sch. 40 PVC
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985799.469 E 677818.2195	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	177.34	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	180.45	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet/ Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Well Configuration	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
0	0			TOPSOIL 1.0 IN. Medium dense, brown, silty SAND (SM), mps >1.0 mm, no structure, no odor, dry	0-2	5	2 6 7 9	SM			Grout to grade	
				Very dense, brown, silty SAND (SM), mps 4.0 in., no structure, no odor, dry. Refusal at 2.3 ft	2-4	3	100/4"	SM				
5				Medium dense, brown to tan, poorly graded SAND (SP), mps 2.0 in., no structure, no odor, dry -FILL-	4-6	10	5 6 6 6	SP				
				Medium dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.0 in., no structure, no odor, wet	6-8	7	2 8 9 10	SP-SM				
				Medium dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.0 in., no structure, no odor, wet	8-10	12	21 16 10 6	SP-SM				
10				Medium dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt. mps 0.8 in., no structure, no odor, wet	10-12	5	8 8 7 7	SP-SM				
				Loose, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 0.7 in., no structure, no odor, wet	12-14	9	8 5 4 3	SP-SM				
15				NO RECOVERY	14-16	NR	8 6 4 2					
	5			Top 6 in. S8: Loose, brown, well graded SAND (SW) with gravel, mps 0.4 in., no structure, no odor, wet S8 bottom 5 in.: Loose, brown, sandy SILT (ML), mps <1.0 mm, no structure, no odor, wet	16-18	11	9 6 3 6	SW ML				
				NO RECOVERY	18-20	NR	4 5 6 6					
20				Medium dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 0.7 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	20-22	7	10 7 4 6	SP-SM				
				Medium dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 0.8 in., no structure, no odor, wet	22-24	8	21 9 8 7	SP-SM				
25				Dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.0 in., no structure, no odor, wet	24-26	9	12 21 22 13	SP-SM				
				Medium dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 0.5 in., no structure, no odor, wet	26-28	8	13 16 9 4	SP-SM				
				Dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.0 in., no structure, no odor, wet	28-30	6	23 22 17 12	SP-SM				
30				Medium dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.0 in., no structure, no odor, wet	30-32	12	11 15 13 12	SP-SM				
				Dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.6 in., no structure,				SP-SM				

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_IW1CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-6 Well ID: HA20-CMT-6

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	3 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley/ D. M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Sch. 40 PVC
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985799.469 E 677818.2195	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	177.34	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	180.45	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet/ Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification
		no odor, wet	32-34	12		
35		Very dense, brown, poorly graded SAND (SP-SM) with Silt,and gravel, mps 1 in. no structure, no odor, wet	34-36	12	19 21 21 18	SP-SM
		Dense, brown, poorly graded SAND (SP-SM) with gravel and silt, mps 1.0 in., no structure, no odor, wet	36-38	11	17 40 27 14	SP-SM
		Very dense, brown, poorly graded SAND (SP-SM) with gravel and silt, mps 2.0 in. no structure,no odor, wet.	38-40	8	13 29 22 15	SP-SM
40		Very dense, brown, poorly graded SAND (SP-SM) with gravel and silt, mps 2.0 in. no structure,no odor, wet	40-42	6	10 24 31 23	SP-SM
		Very dense, brown to red, poorly graded SAND (SP-SM) with gravel and silt, mps 0.5 in. no structure,no odor, wet. -ICE CONTACT DEPOSITS-	42-44	10	40 32 17 16	SP-SM
45		Very dense, brown to red, poorly graded SAND (SP-SM) with gravel and silt, mps 1.5 in. no structure,no odor, wet	44-46	12	6 30 32 21	SP-SM
		Dense, brown, poorly graded SAND (SP-SM) with gravel and silt, mps 2.0 in. no structure,no odor, wet	46-48	10	16 23 38 26	SP-SM
		Medium dense, brown to red, well graded SAND (SW), mps 0.3 in., no structure, no odor, wet	48-50	12	9 21 18 13	SW
50	15	Very dense, brown to red, poorly graded SAND (SP-SM) with gravel and silt, mps 1.0 in., no structure, no odor, wet	50-52	12	11 13 15 17	SP-SM
		Very dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.3 in., no structure, no odor, wet	52-54	11	13 70 87 16	SP-SM
55		Very dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 2.0 in., no structure, no odor, wet	54-56	9	12 33 24 25	SP-SM
		Dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.5 in., no structure, no odor, wet	56-58	9	12 35 30 100/5"	SP-SM
		Very dense, grey, poorly graded GRAVEL (GP-GM) with sand and silt, mps 2.0 in., no structure, no odor, wet	58-60	7	17 23 17 13	GP-GM
60		Very dense, grey, poorly graded GRAVEL (GP-GM) with sand and silt, mps 2.0 in., no structure, no odor, wet	60-62	9	11 38 30 30	GP-GM
		Very dense, grey, poorly graded GRAVEL (GP-GM) with sand and silt, mps 2.0 in., no structure, no odor, wet	62-64	11	7 24 25 22	GP-GM
65	20	Very dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.0 in., no structure, no odor, wet	64-66	10	20 45 16 16	SP-SM
		Very Dense, brown to grey, poorly graded SAND (SP-SM) with gravel and silt, mps 1.0 in., no structure, no odor, wet	66-68	7	19 27 46 36	SP-SM

Borehole Backfill	CMT Well Insrallarion Comments
	bottom of grout 48.0
Bentonite Pellets	top of bentonite pellets 48.0
	bottom of bentonite pellets 63.0
	top of sand 63.0
Top of Screen 65.0	
Channel 65.1-65.4	
Bottom of Screen 65.5	
Bentonite Pellets	bottom of sand 67.5
	top of bentonite pellets 67.5

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-6 Well ID: HA20-CMT-6

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	3 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley/ D. M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Sch. 40 PVC
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985799.469 E 677818.2195	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	177.34	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	180.45	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet/ Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Borehole Backfill	CMT Well Insrallarion Comments
68–70		Very dense, grey, poorly graded GRAVEL (GP-GM) with sand and silt, mps 2.0 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	68-70	5	8 35 55 36	GP-GM		
70–72		Very dense, grey, clayey SAND (SC), mps 0.5 in., weakly bonded, no odor, wet.	70-72	9	11 18 100/2.5"	SC		
72–74		Medium dense, grey, silty SAND (SM), mps 0.8 in., weakly bonded, no odor, wet.	72-74	8	16 36 21 25	SM		
74–76		Dense, grey to brown, silty SAND (SM), mps 0.5 in., weakly bonded, no odor, wet. -GLACIAL TILL-	74-76	8	5 10 16 22	SM		bottom of bentonite pellets 75.0 top of sand 75.0
76–78		NO RECOVERY TOP OF BEDROCK AT 76.5 FT	76-78	NR	4 10 32 29	NR	Top of Screen 77.0 Channel 4 and 1 77.1-77.4 Bottom of Screen 77.5	
78–80		NO RECOVERY	78-80	NR	100/6" 50/0"	NR	Bentonite Pellets	bottom of sand 79.5 top of bentonite pellets 79.5
80–82.5	25	Very hard, fresh, light grey to grey, medium to pegmatitic Acton Granite, massive. Primary joints moderate angle, rough, planar to slightly undulatory, iron stained, tight. Occasional aplite sill with syntaxical mineral growth.	80-82.5	30/30		Recovery=100% RQD=83%		bottom of bentonite pellets 81.0 top of sand 81.0
81.4–84.7		Very hard, fresh, light grey to grey, medium to pegmatitic Acton Granite, massive. Primary joints moderate angle, rough, planar to slightly undulatory, iron stained, tight. Occasional aplite sill with syntaxical mineral growth.	81.4-84.7	40/40		Recovery=100% RQD=100%	Top of Screen 83.0 Channel 3 83.1-83.4 Bottom of Screen 83.5 Bentonite Pellets	bottom of sand 85.5 top of bentonite pellets 85.5
85.8–87.5		Very hard, fresh, light grey to grey, medium to pegmatitic Acton Granite, massive. Primary joints moderate angle, rough, planar to slightly undulatory, iron stained, tight. Occasional aplite sill with syntaxical mineral growth. -ACTON/ANDOVER GRANITE- Stratum change at 88.8' Assabet Quartz Diorite	85.8-87.5	20/20		Recovery=100% RQD=100%		
87.5–92.5		Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, close to moderately spaced, rough, planar to undulatory, tight, commonly healed occasionally iron stained. Secondary joints high angle, closely spaced, rough, planar, iron stained to commonly healed,	87.5-92.5	60/60		Recovery=100% RQD=100%		
92.5–96.2		occasionally offset by Tertiary joints. Tertiary joints vertical, closely spaced, rough, undulatory, epidote and iron stained, occasionally offset Secondary joints. Changes back to Acton Granite at 99.0' -ASSABET QUARTZ DIORITE-	92.5-96.2	45/45		Recovery=100% RQD=76%		
96.2–99	30	Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, close to moderately spaced, rough, planar to undulatory, tight, commonly healed occasionally iron stained.	96.2-99	28/34		Recovery=83% RQD=59%		bottom of bentonite pellets 97.5 top of sand 97.5
99–104		Secondary joints high angle, closely spaced, rough, planar, iron stained to commonly healed, occasionally offset by Tertiary joints. Tertiary joints vertical, closely spaced, rough, undulatory, epidote and iron stained, occasionally offset Secondary joints. Changes back to Acton Granite at 99.0' Very hard fresh light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive.	99-104	60/60		Recovery=100% RQD=83%	Top of Screen 99.5 Channel 5 99.6-99.9 Bottom of Screen 100.0 Bentonite Pellets	bottom of sand 102.0 top of bentonite pellets 102.0

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-CMT-6 Well ID: HA20-CMT-6

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	3 November 2020	**Sampling Method:**	S
Logged By:	Amelia Midgley/ D. M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Sch. 40 PVC
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985799.469 E 677818.2195	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	177.34	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	180.45	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet/ Oiden Gonzalez			**Bit Type / Size:**	Cutting Head

Depth, feet	Depth, metres	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sampler Blows (per ft)	Unified Soil Classification	Well Configuration	CMT Well Configuration	Borehole Backfill	CMT Well Insrallarion Comments
105				Primary joints low angle, close to moderately spaced rough planar to undulatory, tight, commonly healed occasionally iron stained. Secondary joints high angle, closely spaced rough planar iron stained to commonly healed, occasionally offset by Tertiary joints. Tertiary joints vertical, closely spaced rough undulatory epidote and iron stained, occasionally offset Secondary joints. Changes back to Acton Granite at 99.0’ Very hard, fresh, light grey, very coarse grained	104-109	57/60		Recovery=95% RQD=95%				
110				Acton Granite, massive. Primary joints low angle, very close to moderately close, rough, planar to insularity, fresh to iron stained from 102.2-103.1, low angle, tight to open. Secondary joints high angle, close to moderately spaced, rough, planar to undulatory, iron stained to commonly healed, tight. Stratum Change at 99.0 ft Acton Granite -ACTON/ANDOVER GRANITE- Inadvertent return to holding basin at 0930- set 10” casing to 20.0 ft back up at 1130	109-114	60/60		Recovery=100% RQD=90%				
115	35			Andover/Acton Granite high angle healed fractures Very hard, fresh, light grey, very coarse grained Acton Granite, massive. Primary joints low angle, rough, planar, fresh, thought, occasionally healed tight. Secondary joints high angle, close to widely spaced, rough, planar, fresh, healed. Rock mass shows some iron staining pervasive in the rock mass from weathering of biotite. Very hard, fresh, light grey, very coarse grained Acton Granite, massive. Primary joints low angle,	114-119	60/60		Recovery=100% RQD=95%			Top of Screen 118.0 Channel 6 118.1-118.3 Bottom of Screen 118.5	bottom of bentonite pellets 116.0 top of sand 116.0
120				rough, planar , fresh thought, occasionally healed tight. Secondary joints high angle, close to widely spaced, rough, planar, fresh, healed. Rock mass shows some iron staining pervasive in the rock mass from weathering of biotite. Very hard, fresh, light grey, very coarse grained Acton Granite, massive. Primary joints low angle, rough, planar , fresh thought, tight, occasionally healed . Secondary joints high angle, close to widely spaced, rough, planar, fresh, healed. Rock	119-124	60/60		Recovery=100% RQD=100%			Bentonite Pellets	bottom of sand 120.5 top of bentonite pellets 120.5; bottom of bentonite pellets 123.3 top of sand 123.3
125				mass shows some iron staining pervasive in the rock mass from weathering of biotite. -ACTON/ANDOVER GRANITE- Very hard, fresh, light grey, very coarse grained Acton Granite, massive. Primary joints low angle, rough, planar, fresh, thought, tight, occasionally healed . Secondary joints high angle, close to widely spaced, rough, planar, fresh, healed. Rock mass shows some iron staining pervasive in the rock mass from weathering of biotite.	124-126.8	34/34		Recovery=100% RQD=100%			Top of Screen 125.3 Channel 7 Bottom of Screen 126.5	bottom of sand 126.5
130				BOTTOM OF EXPLORATION AT 126.8 FT								
	40											
135												

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG_!W1CMT; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report
Borehole Log ID: HA20-GP-101 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	15 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985696.332 E 677725.7353	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	186.28	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	186.58	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
0			TOPSOIL 1.0 IN. Medium dense, light brown to tan, silty SAND (SM), mps 0.5 in., no structure, no odor, dry -FILL-	0-2	12	4 13 14 15	SM	
			Medium dense, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist, single piece of poly sheet at 2.0 ft.	2-4	17	14 16 12 12	SP	
5			Medium dense, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist -ICE CONTACT DEPOSITS-	4-6	11	7 11 5 5	SP	
			Loose, yellow brown, poorly graded SAND (SP), mps 0.1 in., no structure, no odor, moist	6-8	13	2 3 3 4	SP	
			Loose, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	8-10	12	3 4 3 4	SP	
10			Loose, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	10-12	11	2 2 2 2	SP	
			Loose, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	12-14	11	2 2 2 2	SP	
15			Sonic drill to 30.0 ft					
20								
25								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-101 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	15 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985696.332 E 677725.7353	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	186.28	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	186.58	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
30			Medium dense, brown, poorly graded SAND (SP-SM) with silt, mps 0.1 in., no structure, no odor, wet Calibration test at 30.0 ft to 32.0 ft	30-32	14	8 8 7 8	SP-SM	
			-ICE CONTACT DEPOSITS-					
			Medium dense, tan silty SAND (SM) ,mps 0.5 in., no structure, no odor, wet	33-35	13	6 8 9 9	SM	
35								
			Medium dense, tan silty SAND (SM), mps 0.5 in., no structure, no odor, wet Calibration test at 36.0 ft to 38.0 ft	36-38	15	5 7 9 10	SM	
			Medium dense, tan silty SAND (SM), mps 0.5 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	38-40	9	9 10 10 9	SM	
40			Medium dense, tan silty SAND (SM), mps 0.5 in., no structure, no odor, wet.	40-42	12	10 11 10 9	SM	
			Sonic drill to 65.0 ft					
45								
50								
55								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-101 Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	15 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985696.332 E 677725.7353	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	186.28	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	186.58	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
60								
65			Very loose, tan, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	65-67	12	4 2 2 5	SP	
			ICE CONTACT DEPOSITS-					
			Loose, grey to brown, clayey SAND (SC) with gravel, mps 0.5 in., weakly bonded, no odor, moist				SC	
			Medium dense, grey to brown, clayey SAND (SC) with gravel, mps 0.5 in., weakly to moderately bonded, no odor, moist	67-69	11	6 13 17 24	SC	
			-FLOW TILL-					
70			Ocassional cobbles observed					
			Sonic drill to bottom of exploration 152.0 ft					
75								
80			Grouted 3.0 in. casing in soil with portland bentonite grout					
85								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report
Borehole Log ID: HA20-GP-101 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	15 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985696.332 E 677725.7353	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	186.28	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	186.58	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
90								
95			Grab sample at 95.0 ft to 100.0 ft					
100			Grey Glacial till was bonded					
			Broken rock recovered mixed lithologies, cobbles					
			Recovered grey pegmatitigic quartz - orthoclase-speccartine					
105								
			-ACTON/ANDOVER GRANITE-					
			Fresh, hard gray and black speckled, medium to coarse grained Diorite primary joints moderate angle, close to moderate close, loose, planar, fresh, tight. Quartz healed.					
110								
115								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-101 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	15 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985696.332 E 677725.7353	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	186.28	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	186.58	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
120								
			-ASSABET QUARTZ DIORITE-					
125								
130			Fresh, grey, hard, medium grained Granite, no joints, probable sill					
			-ACTON/ANDOVER GRANITE-					
135								
140								
			Installed 3.0 in. casing to 152.0 ft Grout to 102.0 ft with portland bentonite					
145								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-101 — Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	15 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985696.332 E 677725.7353	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	186.28	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	186.58	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
150								
			BOTTOM OF EXPLORATION AT 152.0 FT					
155								
160								
165								
170								
175								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-102 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.15	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	188.23	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
0			Medium dense tan, poorly graded SAND (SP) with gravel, mps 0.5 in., no structure no odor, dry, root mat -TOPSOIL/DISTURBED SOIL-	0-2	11	3 10 20 16	SP	
			Loose, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	2-4	9	1 2 7 9	SP	
5			Loose, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist -ICE CONTACT DEPOSITS	4-6	13	10 10 7 6	SP	
			Loose, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	6-8	14	6 6 5 4	SP	
			SImilar to above	8-10	14	1 2 1 3	SP	
10			Loose, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	10-12	15	2 3 4 1	SP	
			Loose, yellow brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	12-14	8	1 2 2 2	SP	
15			No recovery - cobble in tip	14-16	0	2 3 4 4		
			Loose, light brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, moist	16-18	11	3 6 5 5	SP	
			Loose, light brown, poorly graded SAND (SP), mps 0.5 in., no structure no odor, moist	18-20	12	4 2 2 2	SP	
20			Loose, brown, poorly graded SAND with silt (SP-SM), mps 0.1 in., no structure, no odor, moist	20-22	12	3 4 4 4	SP-SM	
			Medium dense, tan to light brown, poorly graded SAND with silt (SP-SM), mps 0.1 in., no structure, no odor, moist	22-24	11	4 3 6 6	SP-SM	
25			Medium dense, light brown, poorly graded SAND with silt (SP-SM), mps 0.1 in., no structure, no odor, moist -ICE CONTACT DEPOSITS-	24-26	10	5 4 6 6	SP-SM	
			Medium dense, light brown, poorly graded SAND with silt (SP-SM), mps 0.1 in., no structure, no odor, moist	26-28	11	7 7 9 12	SP-SM	
			Medium dense, light brown, silty SAND (SM), mps 0.05 in., no structure, no odor, moist	28-30	11	11 8 11 9	SM	
30			Medium dense, light brown, silty SAND (SM), mps 0.05 in., no structure, no odor, moist	30-32	12	8 8 10 13	SM	
			Medium dense, light brown, silty SAND (SM), mps 0.05 in., no structure, no odor, moist				SM	

Notes: *Massachusetts State Plane Coordinates NAD 1983

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.15	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	188.23	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
				32-34	12	8 10 9 13		
35			Medium dense, yellow brown to light brown poorly graded SAND (SP), mps 0.2 in., no structure, no odor, moist	34-36	14	5 12 12 14	SP	
			Medium dense, tan silty SAND (SM), mps 0.05 in., no structure, no odor, moist	36-38	13	8 10 11 12	SM	
			Medium dense, tan silty SAND (SM), mps 0.05 in., no structure, no odor, moist	38-40	12	9 12 15 15	SM	
40			Very dense, light brown poorly graded SAND(SP), mps 0.6 in., no structure, no odor, wet.	40-42	9	4 44 40 28	SP	
			Dense, light brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet	42-44	12	16 18 14 13	SP	
45			Medium dense, light brown, well graded SAND (SW), mps 0.3 in., no structure, no odor, wet	44-46	8	8 11 11 11	SW	
			No recovery at 46.0 ft to 48.0 ft	46-48	0	10 10 10 13		
			Medium dense, brown, well graded SAND (SW), mps 1.0 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	48-50	10	7 7 14 11	SW	
50			Dense, light brown to grey brown, poorly graded SAND (SP), mps 0.2 in., no structure, no odor, wet	50-52	4	13 19 40 35	SP	
			Medium dense, grey brown, well graded SAND with silt (SW-SM), mps 0.8 in., no structure, no odor, wet	52-54	5	5 14 13 8	SW-SM	
55			Medium dense, brown, poorly graded SAND (SP), mps 0.3 in., occasional laminae of lean clay up to 1/16 in. thick, no odor, wet	54-56	6	8 16 10 10	SP	
			Medium dense, light brown, silty SAND (SM), mps 0.10 in., frequent silt interbeds up to 1 in. thick, no odor, wet	56-58	12	13 11 9 11	SM	
			Dense, tan, silty SAND (SM), mps 0.10 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	58-60	8	10 17 17 18	SM	
60			Loose, tan to grey brown, well graded SAND (SW), mps 0.20 in., two fining-up sequences of Flaser bedding, no odor, wet	60-62	16	2 2 4 6	SW	
			Running sands- unable to control. Advanced to 64.0 ft depth and resumed sampling.					
65			Medium dense, light brown, silty SAND (SM), mps 0.05 in., frequent interbeds, no odor, wet Drill action indicates stratum change at 66.5 ft	64-66	10	19 5 8 4	SM	
			Very and dense, grey, clayey SAND with gravel (SC) , mps 1.0 in., well bonded, no odor, moist	66-68	10	15 42 44	SC	

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-102 — Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.15	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	188.23	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
			-FLOW TILL-			38		
			Similar to above	68-70	8	14 37 42 45	SC	
70			Loose, grey, clayey SAND with gravel (SC), mps 1.0 in., well bonded, no odor, moist. Blows appear much lower than the sample would suggest. May have been disturbed by advancement with vibration	70-72	10	3 3 5 20	SC	
			Very dense, grey, clayey SAND with gravel (SC), mps 1.0 in., well bonded no odor, moist	72-74	9	125 87 57 63	SC	
75			Dense, grey, clayey SAND (SC), mps 0.5 in., well bonded no odor, moist.	74-76	8	6 14 20 23	SC	
			Very dense, grey to red brown, clayey SAND with gravel (SC), mps 1.0 in., well bonded, no odor, moist	76-78	13	7 32 69 33	SC	
			Dense, grey clayey SAND with gravel (SC), mps 1.0 in., well bonded, no odor, moist	78-80	4	7 20 19 17	SC	
80			Dense, grey, clayey SAND (SC), mps 0.5 in., well bonded, no odor, moist -FLOW TILL-	80-82	7	4 8 26 56	SC	
			Very dense, grey, clayey SAND (SC), mps 0.5 in., well bonded, no odor, moist	82-84	12	6 36 55 59	SC	
85			Similar to above	84-86	13	9 22 57 50	SC	
			Very dense, grey clayey SAND (SC), mps 0.5 in., well bonded, no odor, moist.	86-87.5	12	8 24 41 100/0"	SC	
			Stratum change at 87.5 ft, drill action indicates very dense soil with frequent cobbles					
90			Very dense, grey, clayey SAND (SC), mps 0.5 in., well bonded, no odor, moist. -GLACIAL TILL-	90-91	12	14 81 100/0"	SC	
95			Very dense, grey, clayey SAND with gravel (SC), mps 1.0 in., well bonded, no odor, moist	94-95.3	11	25 95 100/3"	SC	
			Very dense, grey to olive grey, silty SAND (SM), mps 0.8 in., moderately bonded, no odor, moist	96-98	16	68 127 85 96	SM	
100			Over-drilled to 98.5 ft to clear a cobble. No recovery - advance through interval. Advanced to 104.0 ft in intermittent hard and soft zones. Set 6.0 in. casing to 104.0 ft then re-set to 105.0 ft.	98.5-98.6	0	50/1"		
			Probable top of bedrock at 102.0 ft+/-					

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report
Borehole Log ID: HA20-GP-102 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.15	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	188.23	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
			Set up for PQ rock core from 104.0 ft					
105			Very hard, fresh, grey with white spots, medium to coarse grained ASSSABET QUARTZ DIORITE, massive. Primary joints low angle, close to moderately close, smooth, planar, fresh to iron stained, occasionally limonite coated right to occasionally quartz healed. Secondary joints high angle, moderately close, smooth, planar, commonly quartz healed, occasionally iron stained, tight. -ASSABET QUARTZ DIORITE-	104-107.2			Recovery=92% RQD=82%	
			Cascade unable to continue wire-line coring due to tooling issues. Remainder of boring to be sampled with the 4 in. Sample barrel					
110			Recovered Assabet Quartz Diorite at 110.0 ft to 120.0 ft					
115								
120			Recovered Assabet Quartz Diorite at 120.0 ft to 130,9 ft -ASSABET QUARTZ DIORITE-					
125								
130			Recovered white with iron staining felsic aplite dike with common pockmarks and bugs up to 0.25 in. in diameter at 130.0 ft to 140.0 ft					
135								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-102 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.15	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	188.23	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden Unified Soil Classification	Comments
140			Recovered Assabet Quartz Diorite at 140.0 ft to 152.0 ft -ASSABET QUARTZ DIORITE-					
145								
150								
			BOTTOM OF EXPLORATION AT 152.0 FT Note: Set 3.0 in. seismic casing at 152.0 ft but upon retrieval, 45.0 ft of 6.0 in. drill casing disconnected. During recovery of lost drill casing, 3.0 in. seismic casing was broken above bedrock socket. Abandoned 3.0 in. seismic casing and grouted boring to surface. Seismic array will now drill east from HA20-101.					
155								
160								
165								
170								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Borehole Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-102A Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	See HA20-GP-102	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	See HA20-GP-102	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	RQD (%)	Comments
0			Sonic drill to top of bedrock at 94.5 ft. See log for HA20-GO-102 for overburden descriptions.				
5							
10							
15							
20							
25							
30							

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG BEDROCK; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Borehole Log and Well Completion Report
Borehole Log ID: HA20-GP-102A Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	See HA20-GP-102	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	See HA20-GP-102	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	RQD (%)	Comments
35							
40							
45							
50							
55							
60							
65							

Notes: *Massachusetts State Plane Coordinates NAD 1983

Borehole Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-102A   Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	See HA20-GP-102	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	See HA20-GP-102	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	RQD (%)	Comments
70							
75							
80							
85							
90							
95			Top of Bedrock at 94.5 ft Set casing to 94.5 ft Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, moderately spaced, smooth, planar, fresh, tight. -ASSABET QUARTZ DIORITE-	94.5-96.5	24	Recovery=100% RQD=100%	
100			Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints moderate orientation, moderately spaced, smooth, planar, discolored, iron stained, tight. Secondary joints low angle, moderate spacing, rough, planar, discolored, iron stained, tight.	96.5-101.5	60	Recovery=100% RQD=92%	
			Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints high angle, moderately spaced, smooth, planar, discolored, iron stained, tight.				

Notes: *Massachusetts State Plane Coordinates NAD 1983

Borehole Log and Well Completion Report

Borehole Log ID: HA20-GP-102A   Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	See HA20-GP-102	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	See HA20-GP-102	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	RQD (%)	Comments
105			Secondary joint, low angle, moderate spacing, rough, planar, discolored, iron stained, tight. -ASSABET QUARTZ DIORITE-	101.5-106.5	60	Recovery=100% RQD=98%	
110			Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, close to moderately spaced, rough, planar, discolored, iron stained and limonite surface, tight. 107.4 ft to 109.9 ft Apatite Quartz Biotite Intrusion	106.5-111.5	60	Recovery=100% RQD=93%	
115			Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, close to wide spacing, rough, planar, discolored, iron stained, limonite, tight.	111.5-116.5	59	Recovery=98% RQD=96%	
120			Very hard, fresh, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, moderately spaced, smooth, planar, discolored, iron stained, tight. Secondary joints low angle, moderate spacing, rough, undulating to planar, discolored, iron stained to fresh, tight. One primary joint at 119.0 ft moderate angle, rough, undulating, fresh, open.	116.5-121.5	59	Recovery=98% RQD=97%	
125			Very hard, fresh to slightly weathered, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, moderately spaced, smooth, planar, fresh, tight to open. 123.5 ft to 125.0 ft Quartz Apatite Intrusion	121.5-126.5	60	Recovery=100% RQD=88%	
130			Very hard, fresh to slightly weathered, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, moderately spaced, smooth, planar, fresh, tight. Second set of primary joints, high angle to vertical, close spaced. rough to polish slickensided, planar to undulating, discolored to decomposed, iron staining. limonite, tight. -ASSABET QUARTZ DIORITE-	126.5-131.5	60	Recovery=100% RQD=72%	
135			Very hard, slightly to moderately weathered, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints high angle to vertical, extremely close, rough to smooth, undulating to planar joints. discolored to decomposed, iron staining, limonite weakly bonded, tight.	131.5-136.5	53	Recovery=88% RQD=63%	
			Very hard slightly weathered, light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints high angle to vertical, close smooth to rough planar to undulating,				

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG BEDROCK; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Borehole Log and Well Completion Report

Borehole Log ID: HA20-GP-102A   Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	29 September 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985700.963 E 677715.594	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	See HA20-GP-102	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	See HA20-GP-102	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	RQD (%)	Comments
140			discolored to decomposing. Iron staining. limonite. breaks apart. tight to open. second set of primary joints, low angle, moderate spaced. smooth to rough, planar, discolored, iron staining limonite tight.	136.5-141.5	57	Recovery=95% RQD=88%	
145			Very hard fresh light to dark grey, very coarse to medium grained Assabet Quartz Diorite, massive. Primary joints high angle to vertical, close, rough, planar, discolored iron staining limonite, tight. -ASSABET QUARTZ DIORITE-	141.5-145.5	48	Recovery=100% RQD=96%	
			BOTTOM OF EXPLORATION AT 145.5 FT Borehole depth 145.5 ft				
150							
155							
160							
165							
170							

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG BEDROCK; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-103 — Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	14 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985705.4 E 677705.7935	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.63	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	187.89	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
0			Notes: 1. This boring is located 11.0 ft east of location 102A and 22.0 ft east of HA20-GP101. Par of a seismic shear wave triplet. 2. Advanced to 30.0 ft depth. 3. Samples collected during auto hammer calibration check.					
5								
10								
15								
20								
25								
30			Medium dense, tan, silty SAND (SM), mps 0.05 in., no structure, no odor, moist	30-32	22	7 13 15 13	SM	
			Medium dense, light brown, sandy SILT (ML), mps 0.01 in., vaguely foliated with reduction spots, no odor, wet			10 10	ML	

Notes: *MA State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-103 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	14 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985705.4 E 677705.7935	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.63	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	187.89	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
				32-34	16	12 14		
			Medium dense, light brown, silty SAND (SM), mps 0.05 in., no structure, no odor, moist				SM	
35			-ICE CONTACT DEPOSITS-	34-36	20	5 13 16 17		
			Medium dense, brown, poorly graded SAND (SP), mps 0.05 in., no structure, no odor, wet	37-39	14	9 10 10 18	SP	
			Medium dense, light brown, poorly graded SAND (SP), mps 0.05 in., no structure, no odor, moist				SP	
40				39-41	17	10 11 11 12		
			No additional samples collected					
			Advanced to top of bedrock at 92.0 ft					
45								
50								
55								
60								
65								

Notes: *MA State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-103 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	14 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985705.4 E 677705.7935	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.63	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	187.89	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
70								
75								
80								
85								
90								
92			Drill action indicates top of Bedrock at 92.0 ft Advance 50.0 ft into bedrock to set 3.0 in. ID PVC seismic casing. Lithologic samples collected -BEDROCK-					
95								
100								

Notes: *MA State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-103 — Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	14 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985705.4 E 677705.7935	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.63	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	187.89	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
			-BEDROCK-					
105								
110			Bedrock collected is Assabet Quartz Diorite. No iron stained or weathered zones observed					
115								
120								
			-BEDROCK-					
125								
130								
135								

Notes: *MA State Plane Coordinates NAD 1983

Boring Log and Well Completion Report
Borehole Log ID: HA20-GP-103 Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	14 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985705.4 E 677705.7935	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	187.63	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	187.89	**Bit ID / OD:**	3.38/2.5/4
Driller:	Dennis Lee			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden Unified Soil Classification	Comments
140			-BEDROCK-					
			BOTTOM OF EXPLORATION AT 142.0 FT					
145								
150								
155								
160								
165								
170								

Notes: *MA State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-104 Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	4 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985884.65 E 677685.1096	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.73	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	185.05	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
0			HA20-GP-104 is a companion boring to HA20-GP-105 It is one of two unsampled companion borings to set 3.0 in. casing for cross-hole seismic testing Stratigraphy and stratum depths taken from HA20-GP-105 Loose to dense SAND and gravel deposits -ICE CONTACT DEPOSITS-				SP	
5			Advanced to top of bedrock at 105.0 ft					
10								
15								
20								
25								
30								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-104

Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	4 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985884.65 E 677685.1096	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.73	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	185.05	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
35								
40								
45								
50								
55								
60								
65								

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-104 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	4 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985884.65 E 677685.1096	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.73	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	185.05	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
70								
75								
			Very dense, grey, clayey SAND with gravel (SC), mps 1.0 in., weakly to well bonded, no odor, moist -GLACIAL TILL-				SC	
80								
85								
90								
95								
100								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-104 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	4 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985884.65 E 677685.1096	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.73	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	185.05	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
105			Drill action indicates stratum change at 105.0 ft Top of Bedrock at 105.0 ft					
			Sonic drilled rock to set casing for rock core to 155.0 ft recovered rock fragments consistent with Acton Granite and Assabet Quartz Diorite					
110			Bedrock cored is consistent with adjacent boring HA20-GP-105					
			-BEDROCK-					
115			Assabet Quartz Diorite and Acton Granite recovered in sample barrel					
120								
			-BEDROCK-					
125								
130			Grouted annulus with Portland Cement in bedrock and standard bentonite/Portland grout in soils					
135								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-104 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	4 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985884.65 E 677685.1096	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.73	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	185.05	**Bit ID / OD:**	3.38/2.5/4
Driller:	R. Maillet			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
140								
145			-BEDROCK-					
150								
155			BOTTOM OF EXPLORATION AT 155.0 FT Note: Set 3.0 in. Cross Hole Seismic PVC					
160								
165								
170								

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-105 Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	2 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.97	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.98	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
0			Loose, red brown, poorly graded SAND with gravel (SP), mps 0.5 in., no structure, no odor, dry	0-2	19	2 3 3 2	SP	
			Loose, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, dry -FILL-	2-4	18	1 2 2 3	SP	
5			Similar to above	4-6	8	2 2 3 1	SP	
			Loose, brown, poorly graded SAND (SP), mps 0.1 in., no structure, no odor, dry	6-8	15	1 1 1 2	SP	
			Similar to above	8-10	15	3 4 3 1	SP	
10			Medium dense, brown to light brown, poorly graded SAND (SP), mps 0.75 in., no structure, no odor, moist	10-12	20	6 10 10 6	SP	
			Medium dense, light brown to tan, SILT with sand (ML), mps 0.05 in., no structure, no odor, moist	12-14	9	4 8 10 9	ML	
15			Similar to above -ICE CONTACT DEPOSITS-	14-16	12	5 6 5 7	ML	
			Loose, tan, poorly graded SAND (SP), mps 0.05 in., occasional silt layer up to 2 in. thick, no odor, moist	16-18	6	6 5 4 6	SP	
			Dense, tan and light brown banded, poorly graded SAND with Silt (SP-SM), mps 0.10 in., coarsening up sequence with basal silt, no odor, moist	18-20	13	12 15 19 20	SP-SM	
20			Dense, tan and light brown banded, poorly graded SAND with Silt (SP-SM), mps 0.10 in., coarsening up sequence with basal silt, no odor, moist	20-22	15	10 9 10 14	SP-SM	
			Medium dense, tan to light brown, sandy SILT (ML), mps 0.10 in., fining up structure, no odor moist -ICE CONTACT DEPOSITS-	22-24	14	8 12 14 6	ML	
25			Medium dense, tan and light brown banded, silty SAND (SM), mps 1.2 in., fining up sequence, no odor, moist	24-26	11	7 9 10 13	SM	
			Medium dense, light brown, well graded SAND with gravel (SW), mps 1.0 in., no structure no odor, moist.	26-28	15	14 14 15 16	SW	
			Medium dense, brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, moist	28-30	9	9 9 9 11	SW	

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report
Borehole Log ID: HA20-GP-105 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	2 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.97	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.98	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
			Medium dense, grey brown, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, moist	30-32	11	16 13 10 10	SW	
			Medium dense, grey brown, well graded SAND with gravel (SW), mps 1.0 in., no structure no odor, moist	32-34	9	15 16 14 15	SW	
35			Dense, grey, well graded SAND with gravel (SW), mps 1.2 in., no structure no odor, wet	34-36	18	13 17 16 23	SW	
			Dense, light grey brown, poorly graded SAND with gravel (SP), mps 1.2 in., no structure no odor, wet	36-38	6	14 18 16 13	SP	
			Dense, light grey brown, well graded SAND with gravel (SW), mps 1.2 in., no structure no odor, moist	38-40	12	11 17 21 21	SW	
40			Very dense, grey brown, well graded SAND with gravel (SW), mps 0.75 in., no structure,no odor, moist	40-42	10	17 20 32 32	SW	
			Dense, grey brown, well graded SAND with gravel (SW), mps 0.75 in., no structure, no odor, moist	42-44	14	27 24 18 22	SW	
45			Very dense, light brown, poorly graded SAND with gravel (SP), mps 0.8 in., no structure, no odor, moist -ICE CONTACT DEPOSITS-	44-46	10	12 19 39 57	SP	
			Very dense, light brown, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, moist	46-48	17	19 43 46 62	SW	
			Very dense light brown to grey brown, well graded SAND with gravel (SW), mps 1.0 in., no structure, no odor, wet	48-50	10	15 36 25 24	SW	
50			Dense, grey brown, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, wet	50-52	3	34 19 14 18	SW	
			Dense, grey, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, wet	52-54	6	22 21 16 18	SW	
55			Dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure no odor, wet	54-56	18	12 15 22 25	SP	
			NO RECOVERY advance to next interval Cobble at 57.0 ft to 58.0 ft	56-58	0	11 15 27 16		
			Dense, brown, poorly graded SAND with gravel (SP), mps 1.2 in., no structure, no odor, wet	58-60	8	28 28 17 13	SP	
60			Dense, grey brown, well graded SAND with gravel (SW), mps 1.2 in., no structure, no odor, wet	60-62	6	15 24 22 17	SW	

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-105 — Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	2 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.97	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.98	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
			Medium dense, brown, well graded SAND with gravel (SW), mps 1.2 in., 4.0 in. iron stained band, no odor, wet	62-64	17	9 9 9 11	SW	
65			Dense, brown, poorly graded SAND (SP), mps 0.5 in., no structure, no odor, wet -ICE CONTACT DEPOSITS-	64-66	8	18 18 19 14	SP	
			Medium dense, brown, poorly graded SAND (SP), mps 0.3 in., no structure, no odor, wet	66-68	8	9 16 14 17	SP	
			Very dense, light brown to grey brown, poorly graded SAND with gravel (SP), mps 1.2 in., no structure, no odor, wet	68-70	9	6 17 37 26	SP	
70			Dense, brown, poorly graded SAND with gravel (SP), mps 1.0 in., no structure, no odor, wet	70-72	10	12 26 18 14	SP	
			Medium dense, light brown, poorly graded SAND with gravel (SP), mps 0.5 in., no structure, no odor, wet	72-74	2	17 14 13 13	SP	
75			Dense, light brown, silty SAND (SM), mps 0.05 in., frequent interbeds of silt up to 1 in. thick, no odor, wet	74-76	15	14 21 19 18	SM	
			Dense, grey brown, poorly graded SAND (SP), mps 0.05 in., occasional iron stained band up to 2.0 in. thick, tip has moderately bonded silty sand, no odor, wet	76-78	17	14 19 19 22	SP	
			Very dense, grey, clayey SAND with gravel (SC), mps 1.0 in., weakly to moderately bonded, no odor, moist	78-79.2	14	8 24 56 120/2"	SM	
80			Very dense, grey, clayey SAND with gravel (SC), mps 1.0 in., well bonded, no odor, moist	80-82	18	15 33 37 112	SC	
			Similar to above -GLACIAL TILL-	82-84	10	34 7 76 91	SC	
85			Dense, grey, clayey SAND with gravel (SC), mps 1.0 in., well bonded, no odor, moist	84-86	-	11 19 33 43	SC	
			Very dense, grey, clayey SAND with gravel (SC), mps 1.0 in., well bonded, no odor, moist.				SC	
			Similar to above	88-88.1	1	100/1"	SC	
			Refusal on cobble- advanced to next interval					
90			Very dense, grey, clayey SAND with gravel (SC), mps 1.0 in., well bonded, no odor, moist	90-91.5	5	20 155 126	SC	
			Advance to 92.0 ft					
			Very dense, grey, silty SAND (SM), mps 0.7 in., moderately to weakly bonded, no odor, moist	92-94	13	20 25 37 83	SM	

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-105 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	2 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.97	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.98	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
95			Very dense, limited recovery, non-representative	94-95.3	1	18 111 100/4"		
			No Recovery - advance to next interval	96-96.5	0	106 50/0"		
			Very dense	98-100		9 55 54 76		
100			No Recovery - advance to next interval	100-102	0	60 66 82 138		
			Very dense, grey, clayey SAND(SC), mps 0.5 in., well bonded, no odor, moist	102-104	7	58 68 62 85	SC	
105			Very dense, grey, clayey SAND with gravel (SC), mps 1.0 in., moderately to weakly bonded, no odor, moist Top of Bedrock at 105.0 ft	104-104.6	7	10 100/1"	SC	
			Set 6.0 in. casing to 110.0 ft Very dense, grey to black, poorly graded GRAVEL (GP), mps 0.75 in., no structure, no odor, wet Drill action change - Top of BEDROCK at 105.0 ft Sonic drilled rock to 110.0 ft, set casing for rock core to 110.0 ft, recovered rock fragments consistent with Acton Granite and Assabet Quartz Diorite	105-105.3	1	150/4"	GP	
110			Set 6.0 in. casing to 110.0 ft Very hard, fresh, grey with pockets of dark grey, medium to coarse grained Acton Granite, massively bedded. Primary joints low angle, moderately spaced, rough, planar, fresh to commonly iron stained with reaction halos extending up to 2.0 in. into rock mass, tight to open. Secondary joints vertical, close to very closely spaced, rough, planar , disco colored with iron stain, commonly limonite coated, tight to open. Secondary joints commonly separate Assabet Quartz Diorite form Acton Granite across the joint surface. Secondary joints high angle, extremely close to close, rough, undulatory, fresh, tight and commonly healed. 110.5 ft to 112.7 ft Acton Granite. Rock is highly fractured in vertical plane making recovery difficult. Commonly falls out of core barrel on retrieval necessitating tripping out core barrel to clear	110-115	60		Recovery=100% RQD=73%	
115			Core jam and poor recovery. Hard, fresh, grey, fine to medium grained Assabet Quartz Diorite, massive. Primary joints low angle, close to very close, rough, planar to undulating, fresh, tight. Secondary joints vertical, very close, rough, planar, discolored with iron staining with halos extending in to rock mass up to 0.25 in. and limonite coated, tight to open. Primary and secondary joint sets each have a conjugate, orthogonal set. -ASSABET QUARTZ DIORITE-	115-117	6		Recovery=25% RQD=17%	
120			Hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite., massive. Primary joints low angle, rough, undulatory, fresh to disintegrated, tight. Secondary joints vertical, smooth, planar, discolored with iron staining halos extending 1.0 in. into rock mass, limonite coated. Orthogonal set is commonly unstained , tight to open. Tertiary joints high angle, close to very close, rough, planar to undulatory, disintegrated to decomposed, occasionally iron stained and limonite coated, tight to open and commonly healed. -ASSABET QUARTZ DIORITE-	117-122	49		Recovery=82% RQD=6%	
125			Times not recorded- intermittent lifting of bit Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Pprimary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, commonly healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz.	122-127	60		Recovery=100% RQD=58%	

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-105

Well ID: Not Applicable

HALEY ALDRICH

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	2 November 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	183.97	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	184.98	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
			Rock is highly fractured in vertical plane making recovery difficult. Commonly falls out of core barrel on retrieval necessitating tripping out core barrel to clear...*continued...* Times not recorded- intermittent lifting of bit					
			Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Primary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, commonly healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz.	127-129.8	34		Recovery=100% RQD=100%	
130			Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Primary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, commonly healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz.	129.8-134.7	59		Recovery=100% RQD=95%	
135			Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Primary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, commonly healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz.	134.7-136	15		Recovery=94% RQD=69%	
			Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Primary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, commonly healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz.	136-140.3	52		Recovery=100% RQD=92%	
140			Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Primary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, commonly healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz.	140.3-142.3	18		Recovery=100% RQD=100%	
			Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Primary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, commonly healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz.	141.8-143.3	24		Recovery=100% RQD=83%	
145			Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Primary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, commonly healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz.	143.8-146.6	34		Recovery=100% RQD=94%	
			Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Primary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, occasionally epidote healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz. -ASSABET QUARTZ DIORITE-	146.6-150	33		Recovery=80% RQD=76%	
150			Very hard, fresh, grey, aphanitic to medium grained Assabet Quartz Diorite, massive. Primary joint low angle, close to moderately spaced, smooth, planar, fresh, tight, occasionally epidote healed. Secondary joints high angle, close to moderately spaced, rough, planar, fresh, tight to healed with aplite/ Quartz.	150-155	54		Recovery=90% RQD=83%	
155			BOTTOM OF EXPLORATION AT 155.0 FT					

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-106 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	20 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	184.4	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Surveyed	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden Unified Soil Classification	Comments
0			HA20-GP-106 is a companion boring to HA20-GP-105 It is one of two unsampled companion borings to set 3.0 in. casing for cross-hole seismic testing Stratigraphy and stratum depths taken from HA20-GP-105 Loose to dense SAND and gravel deposits -ICE CONTACT DEPOSITS- Advanced to top of bedrock at 105.0 ft				SP	
5								
10								
15								
20								
25								
30								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

Borehole Log ID: HA20-GP-106 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	20 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	184.4	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Surveyed	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
35								
40								
45								
50								
55								
60								
65								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-106 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	20 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	184.4	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Surveyed	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
70								
75								
			Very dense, grey, clayey SAND with gravel (SC), mps 1.0 in., weakly to well bonded, no odor, moist -GLACIAL TILL-				SC	
80								
85								
90								
95								
100								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Boring Log and Well Completion Report
Borehole Log ID: HA20-GP-106 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	20 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	184.4	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Surveyed	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
105			Drill action indicates stratum change at 105.0 ft Top of Bedrock at 105.0 ft					
			Sonic drilled rock to set casing for rock core to 155.0 ft recovered rock fragments consistent with Acton Granite and Assabet Quartz Diorite					
110			Bedrock cored is consistent with adjacent boring HA20-GP-105					
			-BEDROCK-					
115			Assabet Quartz Diorite and Acton Granite recovered in sample barrel					
120								
125			-BEDROCK-					
130			Grouted annulus with Portland Cement in bedrock and standard bentonite/Portland grout in soils					
135								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Report: H&A-NMI LOG; File: \\HALEYALDRICH.COM\SHARE\BOS_COMMON\131884-NMI\GINT\BECKY DATABASES WORK IN PROGRESS\131884-004-TB-OW-CMT.GPJ; 9/15/2022

Boring Log and Well Completion Report

HALEY ALDRICH

Borehole Log ID: HA20-GP-106 Well ID: Not Applicable

Project No.:	131884-004	**Project Name:**	NUCLEAR METALS INC.	**Location:**	CONCORD, MA
Client:	DE MAXIMIS, INC.	**Completion Date:**	20 October 2020	**Sampling Method:**	S
Logged By:	D.M Palleiko	**Site Datum:**	MA ST PL NAD 1983*	**Well Material:**	Not Applicable
Reviewed By:	J. Bode/K. Alepidis	**Coordinates:**	N 2985896.769 E 677687.6898	**Rig Type:**	Track
Drilling Company:	Cascade Drilling	**Ground Surface Elevation:**	184.4	**Casing Size:**	6
Drilling Method:	Drive and Wash, Sonic	**Top PVC Casing Elevation:**	Not Surveyed	**Bit ID / OD:**	3.38/2.5/4
Driller:	K. Smith			**Bit Type / Size:**	Cutting Head

Depth, feet	Water Level	Stratigraphy	Lithologic Description	Core/Run Interval (ft)	Recovery (in.)	Sample Blows (per ft)	Overburden: Unified Soil Classification	Comments
140–155			-BEDROCK-					
155			BOTTOM OF EXPLORATION AT 155.0 FT Note: Set 3.0 in. Cross Hole Seismic PVC					
160								
165								
170								

Notes: *Massachusetts State Plane Coordinates NAD 1983

Test Pit Logs

HALEY ALDRICH

TEST PIT LOG

HA21-TP-101

PROJECT	NMI - Nuclear Metals, Inc.	H&A FILE NO.	131884-003, -004
LOCATION	2229 Main Street, Concord, MA	PROJECT MGR.	M. Kelley
CLIENT	De Maximis, Inc.	FIELD REP	M. Plourde
CONTRACTOR	O+M	DATE	4/23/21
EQUIPMENT	303.5E CAT Track mounted Mini excavator	WEATHER	Clear 50s

Ground El.	ft.	Location	See Plan	Groundwater depths/entry rates (in./min.):
El. Datum	NGVD 29	PID Make/Model	Ion Tiger	N/A

Depth (ft.)	Sample ID	Stratum Change Depth (ft.)	USCS Symbol	Visual Identification (Color, GROUP NAME & SYMBOL, % oversized, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Toughness	Plasticity	Strength
0	HA21-TP-101-0_4	0.0 1.0	SP	Dark brown poorly graded SAND with silt, 0% oversized, no structure, no odor, dry. -TOP SOIL-		5	15	30	40	10				
			SP-SM	Brown poorly graded SAND with silt and gravel, 0% oversized, mps=1.5, no structure, no odor, dry -FILL-	5	10	10	25	30	20				
5				BOTTOM OF EXPLORATION 4.0 FT										

Obstructions: N/A

Remarks: Two test pits
See Sketch

Field Tests
Dilatancy: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

Standing water in completed pit:
at depth N/A ft.
measured after hrs. elapsed

Boulders: Diameter (in.)	Number		Approx. vol. (cu. ft.)
12 to 24	~5	=	
over 24	0	=	

Test Pit Dimensions (ft.):
Pit Depth 4
Pit Length X Width 7.5X3

NOTE: Soil identifications based on visual/manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

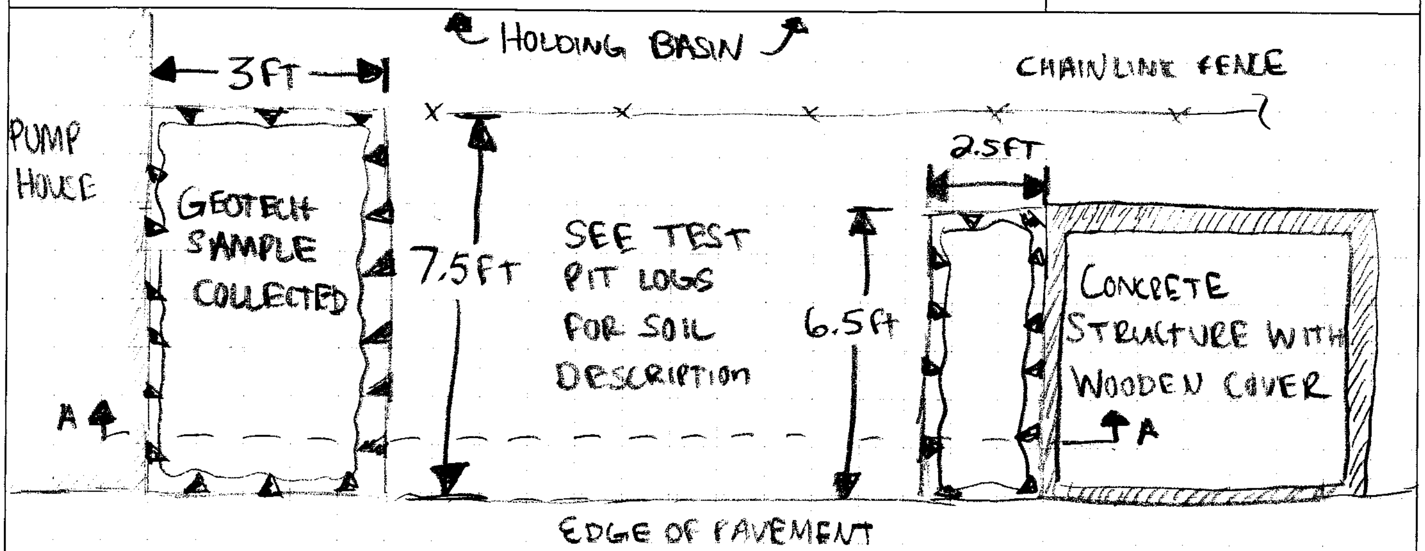
Form 2006

Form 2006 USCS Geo

HALEY ALDRICH

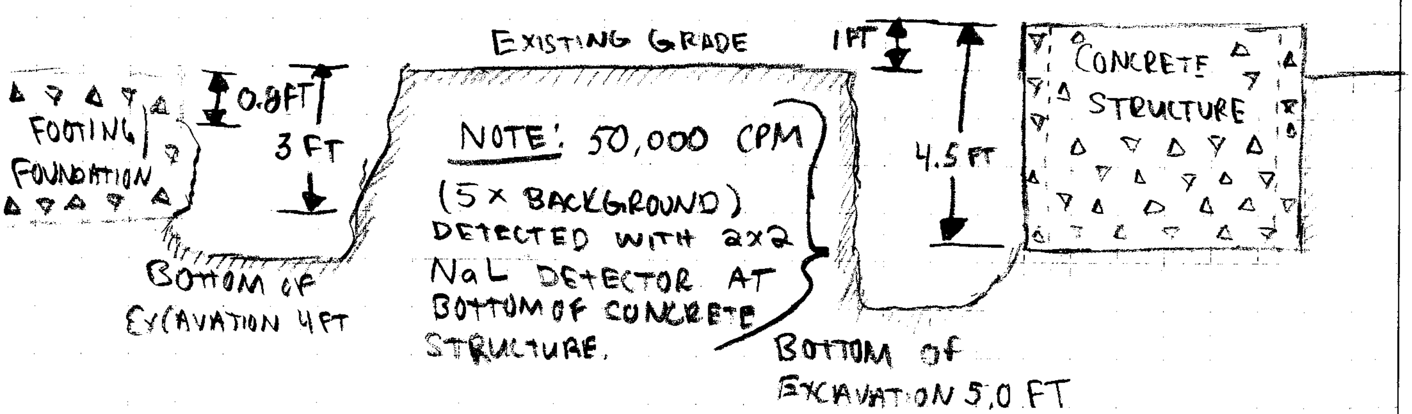
CALCULATIONS

Client	de maximis inc
Project	Nuclear Metals Inc (NMI)
Subject	Pump House Test Pits (HA21-TP-101)
File No.	131884-004
Sheet	1 of 1
Date	4/23/21
Computed By	M. Plourde
Checked By	



PLAN VIEW

NOT TO SCALE



SECTION A-A

NOT TO SCALE

HALEY ALDRICH

TEST PIT LOG

PROJECT	NMI - Nuclear Metals, Inc.	H&A FILE NO.	131884-003, -004
LOCATION	2229 Main Street, Concord, MA	PROJECT MGR.	M. Kelley
CLIENT	De Maximis, Inc.	FIELD REP	M Plourde
CONTRACTOR	O+M	DATE	4/22/21
EQUIPMENT	CAT 303.5E mini track mounted excavator	WEATHER	Cloudy 40's

Ground El.	ft.	Location	See Plan	Groundwater depths/entry rates (in./min.): NA
El. Datum	NGVD 29	PID Make/Model	10.6 Tiger	

Depth (ft.)	Sample ID	Stratum Change Depth (ft.)	USCS Symbol	Visual Identification (Color, GROUP NAME & SYMBOL, % oversized, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		0.0		Bituminous Concrete pavement										
		0.3	SP-SM	Brown Poorly graded SAND with Silt and gravel, 10% oversized, mps=1.0. no structure, no odor, dry.	10	10	10	30	25	15				
		5.0		Brown to red brown poorly graded Sand with Silt. 0% oversized, mps=1.0, no structure no odor, dry		10	10	35	25	20				
5				BOTTOM OF EXCAVATION 5.0 FT										

Obstructions: NA

Remarks:

Field Tests

Dilatancy:	R - Rapid S - Slow N - None
Toughness:	L - Low M - Medium H - High
Plasticity:	N - Nonplastic L - Low M - Medium H - High
Dry Strength:	N - None L - Low M - Medium H - High V - Very High

Standing water in completed pit:
at depth NA ft.
measured after NA hrs. elapsed

Boulders:

Diameter (in.)	Number		Approx. vol. (cu. ft.)
12 to 24	~10	=	
over 24	≥10	=	

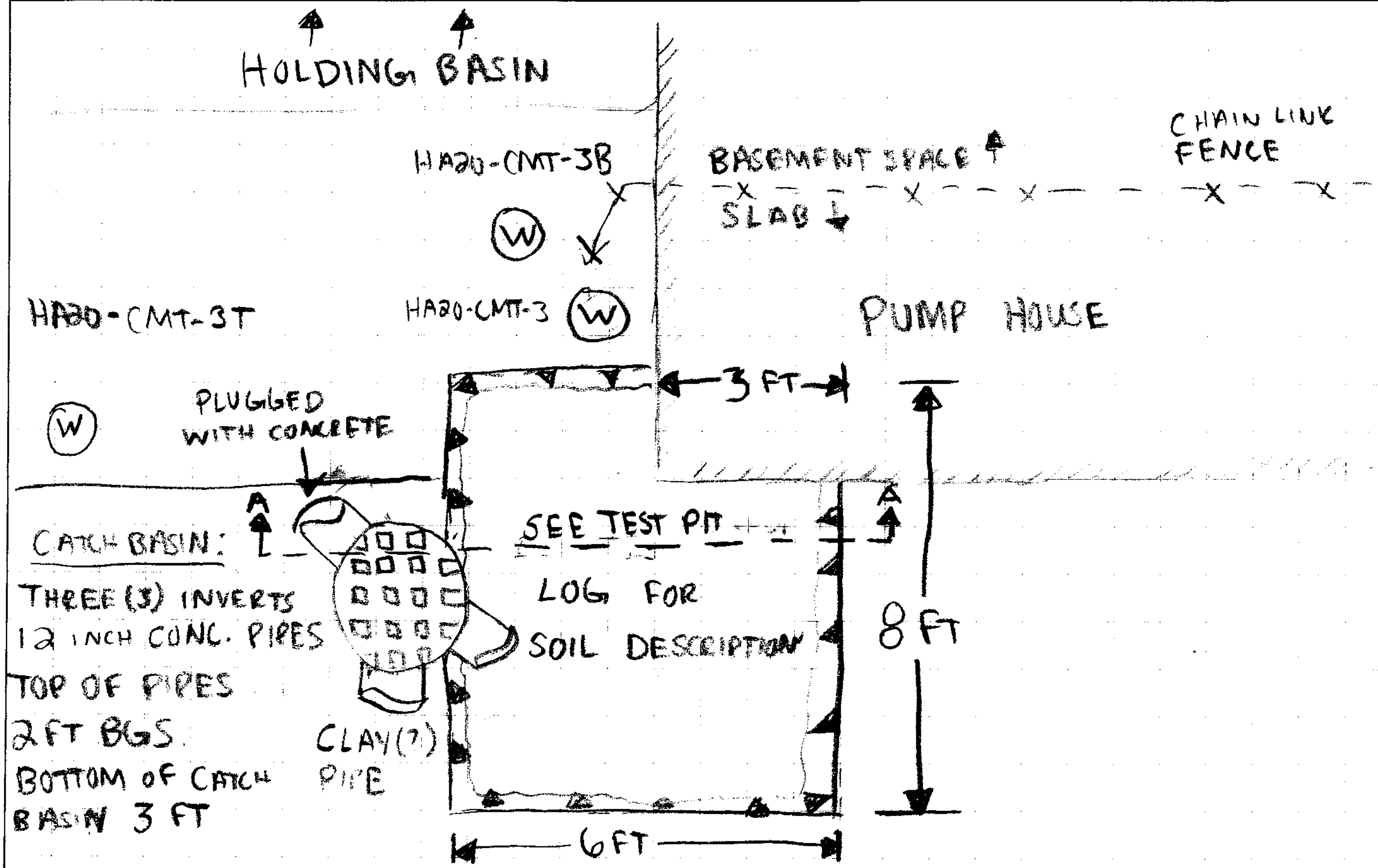
Test Pit Dimensions (ft.):
Pit Depth 5
Pit Length X Width 8x6

NOTE: Soil identifications based on visual/manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY ALDRICH

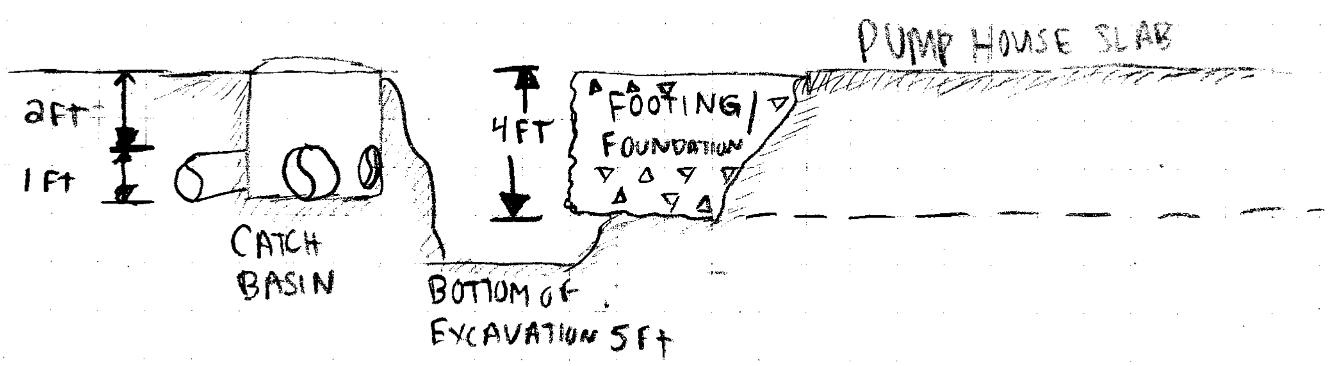
CALCULATIONS

Client	de maximis inc	File No.	131884-004
Project	Nuclear Metals inc	Sheet	1 of 1
Subject	Pump house Test PITS (HA21-TP-102)	Date	4/22/21
		Computed By	M. Plourde
		Checked By	



PLAN VIEW

NOT TO SCALE



SECTION A-A

NOT TO SCALE

HALEY ALDRICH

TEST PIT LOG

HA21-TP-103

Page 1 of

PROJECT	NMI - Nuclear Metals, Inc.	H&A FILE NO.	131884-003, -004
LOCATION	2229 Main Street, Concord, MA	PROJECT MGR.	M. Kelley
CLIENT	De Maximis, Inc.	FIELD REP	M. Plourde
CONTRACTOR	O+M	DATE	4/23/21
EQUIPMENT	CAT 303.5E Track mounted mini excavator	WEATHER	Clear 50s

Ground El. ______ ft. Location: See plan

El. Datum: NGVD29 PID Make/Model: Ion Tiger

Groundwater depths/entry rates (in./min.): NA

Depth (ft.)	Sample ID	Stratum Change Depth (ft.)	USCS Symbol	Visual Identification (Color, GROUP NAME & SYMBOL, % oversized, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	HA21-TP-103-0-4	0.0	SP	Dark brown poorly graded SAND with silt and gravel, 0% oversized, mps = 1.5, no structure, no odor, dry. -FILL-		15	15	25	30	15				
		4.0												
5				BOTTOM OF EXCAVATION 4.0 FT										

Obstructions: NA

Remarks:

Field Tests	
Dilatancy:	R - Rapid S - Slow N - None
Toughness:	L - Low M - Medium H - High
Plasticity:	N - Nonplastic L - Low M - Medium H - High
Dry Strength:	N - None L - Low M - Medium H - High V - Very High

Standing water in completed pit: at depth NA ft. measured after ______ hrs. elapsed

Boulders:

Diameter (in.)	Number		Approx. vol. (cu. ft.)
12 to 24	0	=	
over 24	75	=	

Test Pit Dimensions (ft.): Pit Depth 4; Pit Length X Width 3x4

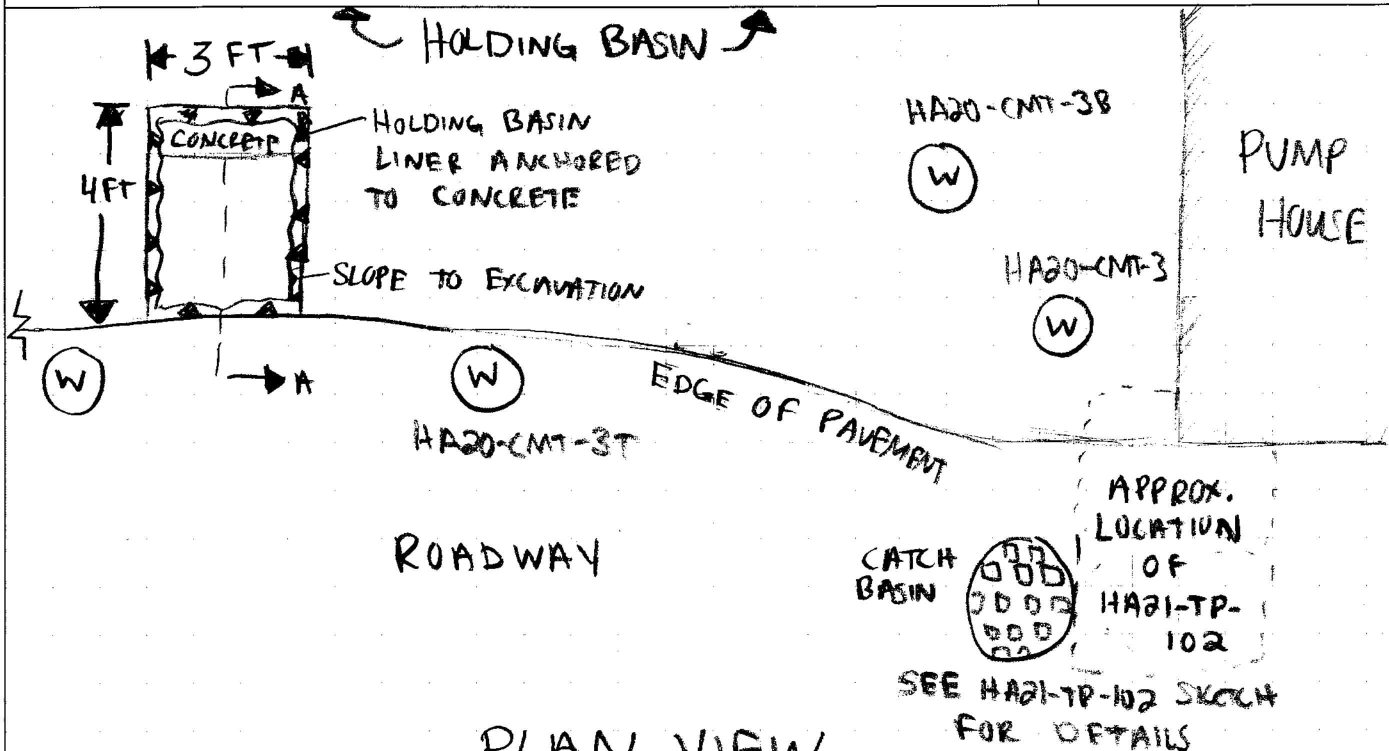
NOTE: Soil identifications based on visual/manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY ALDRICH

CALCULATIONS

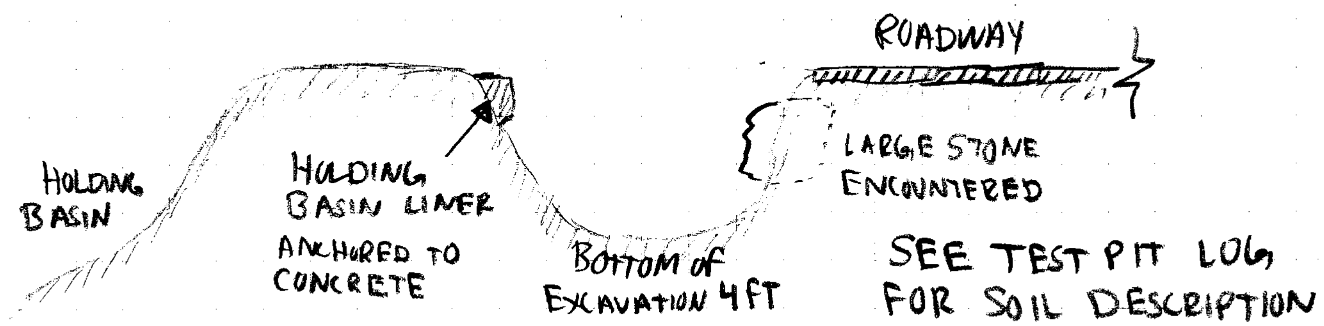
Client: de maximis
Project: Nuclear Metals Inc (NMI)
Subject: Pump House Test Pits (HA21-TP-103)

File No.: 131884-004
Sheet: 1 of 1
Date: 4/23/21
Computed By: M. Plourde
Checked By:



PLAN VIEW

NOT TO SCALE



SECTION A-A

NOT TO SCALE

MMP_HA4x4Calc 8 Jan 2015

100% Post-consumer waste

Auto-Hammer Calibration Reports

GEOSCIENCES TESTING AND RESEARCH, INC.

55 Middlesex Street, Suite 225, N. Chelmsford, MA 01863
Ph: (978)251-9395, Fx: (978)251-9396

October 21, 2020 GTR Project # 20.276

Mr. Fred Lavoie
Cascade Environmental
151 Suffolk Lane
Gardner, Ma 01440

RE: Standard Penetration Test Energy Measurement Calibration
Boart Longyear RC100 w/ Automatic Hammer
Concord, Ma

Dear Fred:

At your request, we have analyzed the standard penetration test energy measurement calibrations taken on October 8, 2020. The testing was conducted in order to evaluate the energy delivered to the sampling rods for various drill rig and hammer combinations. This information was used to determine the appropriate energy correction factor for the rig-hammer system. The particular rig tested in this report was the Boart Longyear RC 100 with an Automatic Hammer. The dynamic testing was carried out in general accordance with ASTM D4633-10, “Standard Test Method for Energy Measurement for Dynamic Penetrometers”.

Field Information

One Boart Longyear RC 100 with an Automatic Hammer was evaluated. See Appendix B for pictures of the rig. The rig was fitted with an automatic hammer. A borehole was performed at onsite at 2229 Main Street in Concord, Ma. The drilling was accomplished using 4” ID HW Casing and AWJ rods. A standard split spoon sampler was used to collect the samples. Standard penetration tests (SPTs) were conducted at depths of 30, 32, 34, 37 and 39 feet in general accordance with ASTM D1586. The collected soil samples generally indicated silty sand and sandy silt. Refer to Table 1 for details on the field information and conditions.

Instrumentation

For tests the instrumentation consisted of an 18 inch long AWJ rod sub section. The rod was equipped with two full bridge foil resistance strain gages. Two piezo resistive accelerometer transducers were also attached to each of the instrumented sub sections. A Pile Driving Analyzer™ (PDA) Model 8G, manufactured by Pile Dynamics, Inc. was used to collect the data. The PDA is a computer fitted with a data acquisition and signal conditioning system. During driving of the drill string, the strain and acceleration signals are recorded and processed for each hammer blow. The strain signal is converted to a force record and the acceleration signal is converted to a velocity record. The PDA saves selected hammer blows containing this information to disk and determines the compressive stresses, displacement, and energy at the point of measurement. This information can be viewed on the computer screen during driving. Refer to Appendix A for literature and background on dynamic testing in general.

Energy Measurement

The primary purpose of the testing was to determine the energy transferred from the hammer to the instrumented subsection. The PDA measurements of force and velocity were analyzed to calculate the energy using the FV method (EMX), which is based on both force and velocity measurements as follows:

$$EMX = \int F(t)\, v(t)dt$$

Another method, known as the EF2 method, was not used due to the limitations associated with the measurements (i.e. based on force alone assuming proportionality at the gage locations since velocity is not used in the analysis). The EF2 method is not the recommended method in ASTM D4633.

The rated energy (designated as ER) for the hammer is 0.35 kip-ft based on the 2.5 feet (30 inch) drop height and 0.14 kip (140 pound) ram. The actual efficiency or energy transfer ratio (ETR) for the hammer system can then be determined using EMX and ER as follows:

ETR = (EMX/ER)*100%

For SPT, the typical ETR is taken as 60%, based on history and experience from prior studies. To adjust the measured SPT N values (Nmeasured) for actual hammer performance, the ETR can be used to correct the Nmeasured to N_{60} by using the correction factor (Cn) determined as:

Cn = ETR/60%

and N_{60} = Cn * Nmeasured.

This is a correction for energy only. The application of additional corrections for overburden, non-conventional samplers, etc., was not considered in this study and should be evaluated for appropriateness by the geotechnical engineer for this project.

Results

The results of the testing program are summarized in Tables 1 for the automatic hammer. The tables include EMX, ER, ETR, FMX (maximum measured force in the rod subsection), and BPM (blows per minute). The blow count, including the SPT N- value, and the soil description were recorded by others. See Appendix C for the boring log. The data was presented with statistical information including the average, maximum, minimum and standard deviation for the N-value associated with group of data sets (sample depths) for the hammer. In addition, the data for all depths for a particular hammer combined are also presented in the tables. Note that the N-value may not match the number of blows analyzed due to differences between the inspector's blow count observations and the PDA recorded number. In some cases, bad blows or unreliable data from the PDA may also have been omitted. These results for the blows are presented in Appendix D as plots with blow number and in tabular form. Additional information is also presented in Appendix D including maximum velocity, maximum acceleration, maximum displacement and final displacement.

For the Boart Longyear RC 100 with an Automatic Hammer, the results indicate that the average ETR varied between 83% and 93% for the five conforming test depths. The average ETR for all data with N-Values between 10 and 50 (5 locations) was around 87%, resulting in an overall Cn = 1.45. The typical blow rate was around 57 bpm for the automatic hammer.

This report has been prepared in accordance with generally accepted geotechnical engineering principles with specific application to this project. Our conclusions are based on applicable standards of practice, including any information reported to and/or prepared for us. No other warranty, expressed or implied, is made.

We have appreciated this opportunity to work with you on this project. If you have any questions regarding this report, please contact us at (978) 251-9395.

Sincerely,
Geosciences Testing and Research, Inc.

Domenic E. Valeri
Geotechnical Engineer

Curtis A. George, P.E.
Principal

Attachments: Table, Appendices A - D
20.276 Cascade Drilling SPT Report.docx

TABLE

TABLE 1
SPT ROD[1] CALIBRATION
BOART LONGYEAR RC 100 WITH AN AUTOMATIC HAMMER
SUMMARY OF RESULTS

RIG TYPE	HAMMER TYPE	BORING	DATE	Test Number	OPERATOR	DEPTH	SAMPLE [2] DESCRIPTION	BLOW [2] COUNT	BLOWS [3] ANALYZED		EMX[4] (k-ft)	ER[5] (k-ft)	ETR[6] (%)	FMX (kips)	BPM (bpm)	Cn[7]
Boart Longyear RC100	Auto Hammer	HA20-GP-103	10/8/20	#1	D.L	30-32	Silty sand (SM)	7,13,15,13	28	Average	0.307	0.350	87.7	27.2	57.5	1.46
										Std.Dev.	0.004	0.000	1.2	0.3	0.2	
										Maximum	0.318	0.350	90.9	27.6	58.2	
										Minimum	0.298	0.350	85.1	26.7	57.1	
				#2	D.L	32-34	Sany silt (ML)	10,10,12,14	22	Average	0.303	0.350	86.5	27.1	57.4	1.44
										Std.Dev.	0.004	0.000	1.1	0.3	0.2	
										Maximum	0.311	0.350	89.0	27.6	57.7	
										Minimum	0.297	0.350	84.8	26.5	57.2	
				#3	D.L	34-36	Silty sand (SM)	5,13,16,17	29	Average	0.296	0.350	84.7	27.1	57.4	1.41
										Std.Dev.	0.004	0.000	1.1	0.4	0.3	
										Maximum	0.304	0.350	86.8	27.6	57.9	
										Minimum	0.290	0.350	82.8	26.3	57.0	
				#4	D.L	37-39	Poorly graded sand (SP)	9,10,10,18	20	Average	0.305	0.350	87.2	26.9	57.4	1.45
										Std.Dev.	0.006	0.000	1.6	0.6	0.2	
										Maximum	0.318	0.350	90.9	27.5	57.6	
										Minimum	0.292	0.350	83.4	25.9	57.0	
				#5	D.L	39-41	Poorly graded sand (SP)	10,11,11,12	22	Average	0.315	0.350	89.9	27.0	57.2	1.50
										Std.Dev.	0.007	0.000	1.9	0.4	0.3	
										Maximum	0.327	0.350	93.3	27.6	57.9	
										Minimum	0.305	0.350	87.2	26.3	56.4	
				Average[8]		-	-	-	121	Average	0.305	0.350	87.1	27.1	57.4	1.45
										Maximum	0.327	0.350	93.3	27.6	58.2	
										Minimum	0.290	0.350	82.8	25.9	56.4	

Notes:
1. NWJ rods used with NWJ instrumented rod.
2. The soil description and SPT N-value were recorded by others. The SPT N-value is the sum of the middle 2 numbers when the sampler s driven for 4 - six inch intervals
3. Blows analyzed correspond to SPT N-value and may not match up exactly with the N-value due to differences in blow count logging between PDA and inspector or poor data quality.
4. EMX is the integration of F and V obtained from the PDA.
5. ER is the rated energy of 0.35 kip-ft based on 140 pound hammer and 2.5 feet drop height.
6. ETR is the energy transfer ratio based on (EMX/ER)*100%.
7. Cn is the energy correction factor which is equal to ETR/60% and is used to convert the measured SPT N-value to the corrected equivalent value representing 60% energy transfer.

APPENDIX A
DYNAMIC ANALYSIS LITERATURE

HIGH STRAIN DYNAMIC PILE TESTING

Introduction

Dynamic pile testing (a.k.a. High Strain Dynamic Pile Testing - HSDPT) is commonly employed for evaluating the capacity of driven piles. It is also provides information about hammer performance and pile integrity/stresses. Dynamic testing is carried out in accordance with ASTM D4945, “Standard Test Method for High Strain Dynamic Testing of Piles”. Dynamic pile testing involves using strain gages and accelerometers to record an impact wave and its reflections generated by a piling hammer. Both driven piles and drilled foundations can be tested (provided that an impact hammer is used to create the high strain wave for the drilled foundations).

Procedure

Dynamic pile testing was performed using a Pile Driving Analyzer (PDA®), such as the PAK®, PAL®, or PAX® systems, manufactured by Pile Dynamics, Inc. (PDI) of Cleveland, Ohio. These systems are computers fitted with data acquisition and signal conditioning components. The instrumentation consists of two strain gages and two accelerometer transducers attached a minimum of 1.5 pile diameters below the pile top. During impact, the strain and acceleration signals are recorded and processed for each hammer blow. The strain signal is converted to a force record and the acceleration signal is converted to a velocity record. The PDA® saves selected hammer blows containing this information to disk and determines the transferred energy, compressive/tensile stresses, displacement, pile integrity, and the estimated pile bearing capacity using the Case Method. This information can be viewed on the computer screen during driving. A screen shot of data collection in the PDA® Windows (PDA-W®) Program is provided in Figure 1. Selected blows can be further processed to predict the static pile capacity using signal matching programs.

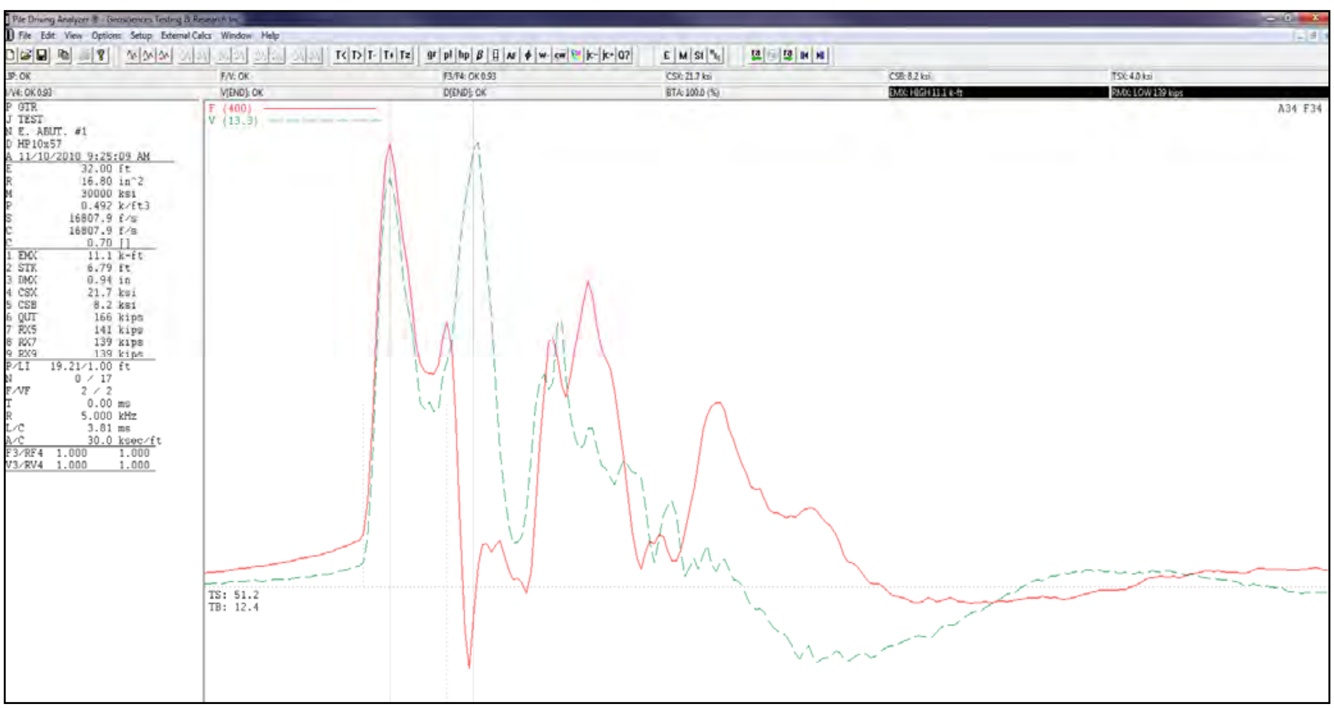


Figure 1. Data collection during pile driving in the (PDI - PDA®-Win Program).

Theory

When a ram strikes the pile head, it initiates a large strain wave that propagates down the pile as illustrated in Figure 2. External soil resistance or changes in the pile's impedance (due to variations in the pile's material or geometry) causes reflection waves that are recorded by the instrumentation. Knowing the material properties and pile geometry at the point of measurement, the strain can be converted to force, while the acceleration is integrated with time to produce velocity.

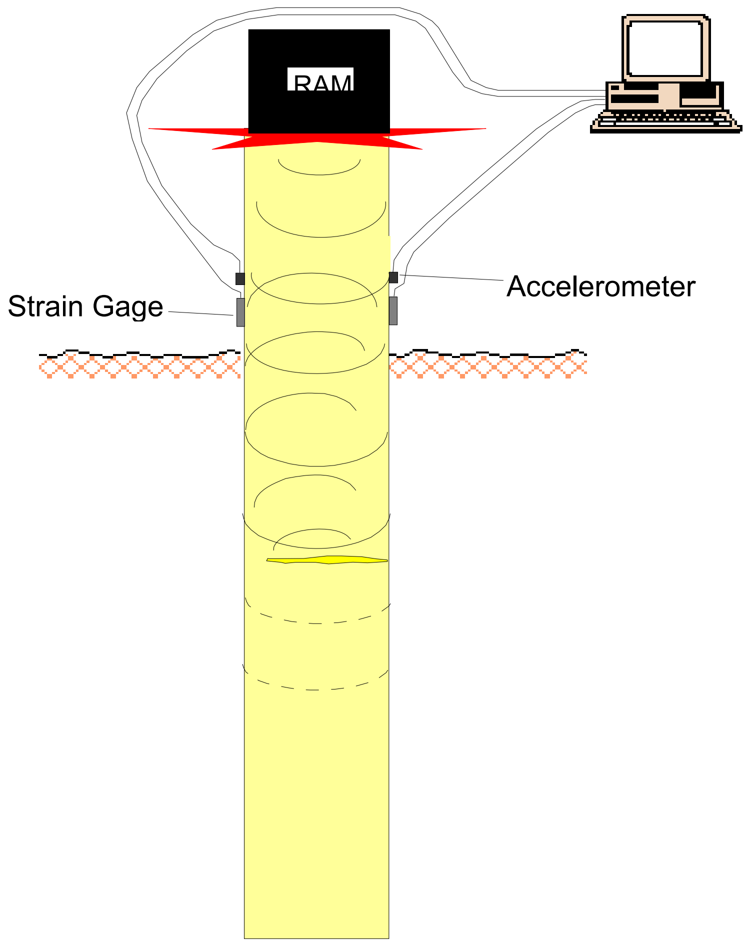


Figure 2. Pile instrumentation and hammer impact.

As long as there is no change in the pile impedance and there are no external forces (i.e. friction), the force and velocity are proportional (equal). Reflections at the tip can be explained by two classical boundary conditions. Free end conditions (analogous to easy driving through soft clay) require zero force and no velocity restrictions at the tip, resulting in a compression wave returning as a tension wave and an increase in velocity (theoretically doubling). Figure 3 graphically presents a typical reflection from a pipe pile during penetration into soft clay. Fixed end conditions (analogous to hard driving into bedrock) require zero velocity and no force restrictions at the tip, resulting in a compression wave being reflected with a greater magnitude than the incident wave (theoretically doubling) and the tip velocity at theoretically zero. Figure 4 graphically presents a typical reflection from an H-pile driven to bedrock. The time the wave takes to travel down to the tip and reflect back to the transducers is twice the pile length divided by the wave speed of the pile material (2L/C).

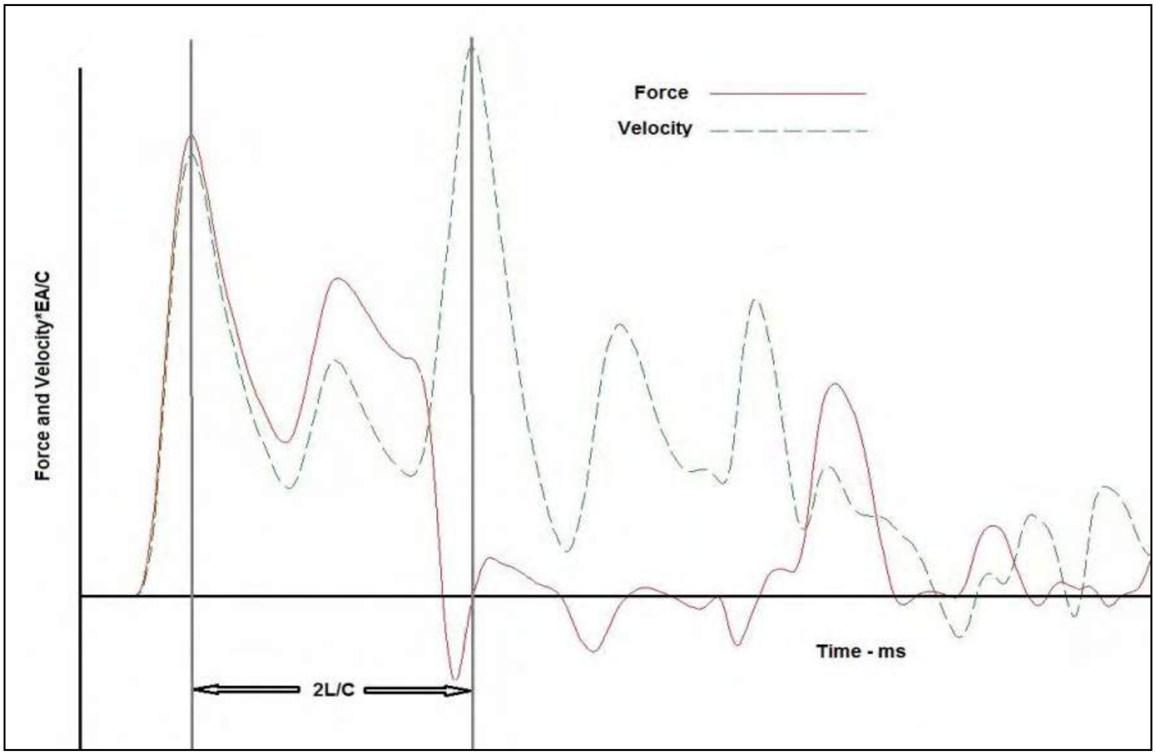


Figure 3. Typical Force and Velocity traces for a pipe pile driven into soft clay
(high velocity and low force at tip - 2L/C).

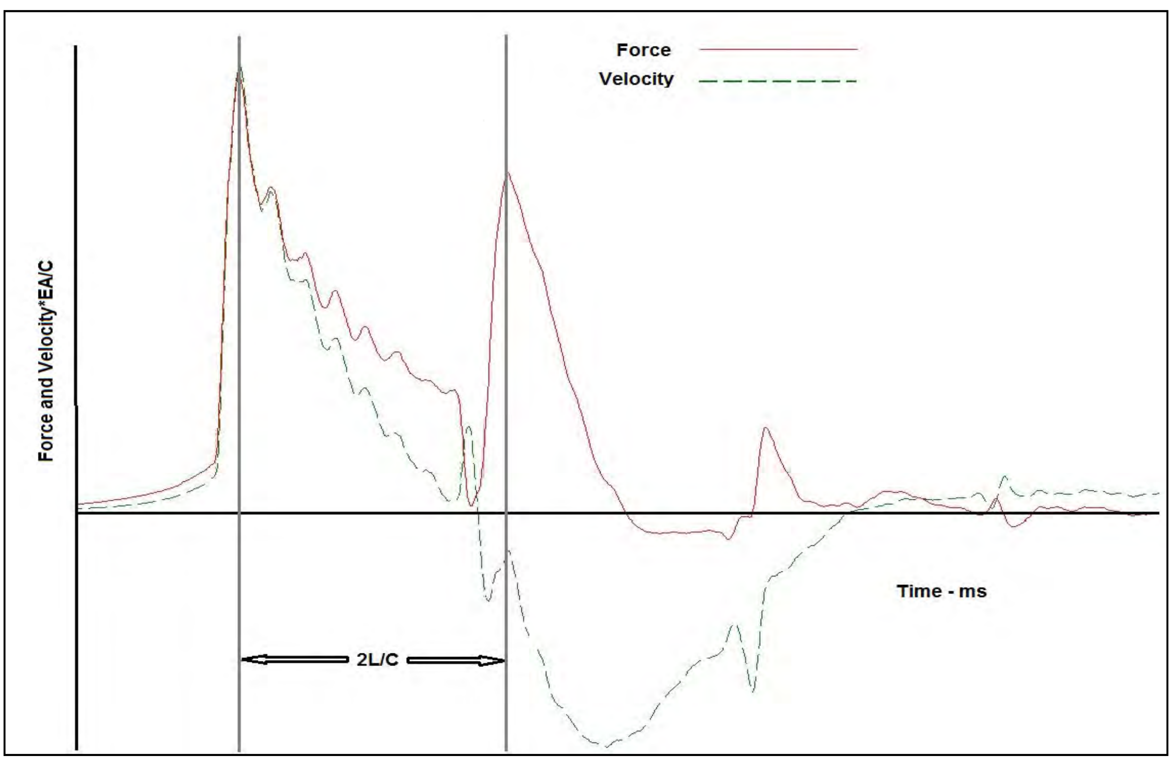


Figure 4. Typical Force and Velocity traces for an H-pile driven into bedrock
(high force and low velocity at tip - 2L/C).

If a pile contains a defect or is damaged (e.g. reduction in impedance) during driving, the wave reflecting from the zone of decreased impedance will show a reduction in the force and increase in the velocity (somewhat comparable to "free end conditions"). These reflections would arrive to the measuring transducers before the expected reflections associated with the pile tip as the damaged zone is at a point along the pile between the transducer location and pile tip. The detection of damage during driving is usually easily identifiable and typically associated with cracking of concrete piles or splice breakage.

Dynamic Testing Summary Output

After data collection, the most pertinent output quantities from the dynamic pile testing can be summarized in a graphical manner. The data can be also presented in tabular format, averaging the results based on penetration depth or blow number as specified by the user. Figure 5 shows typical graphical output. Each of the three plots presents two quantities sharing the vertical (penetration) axis.

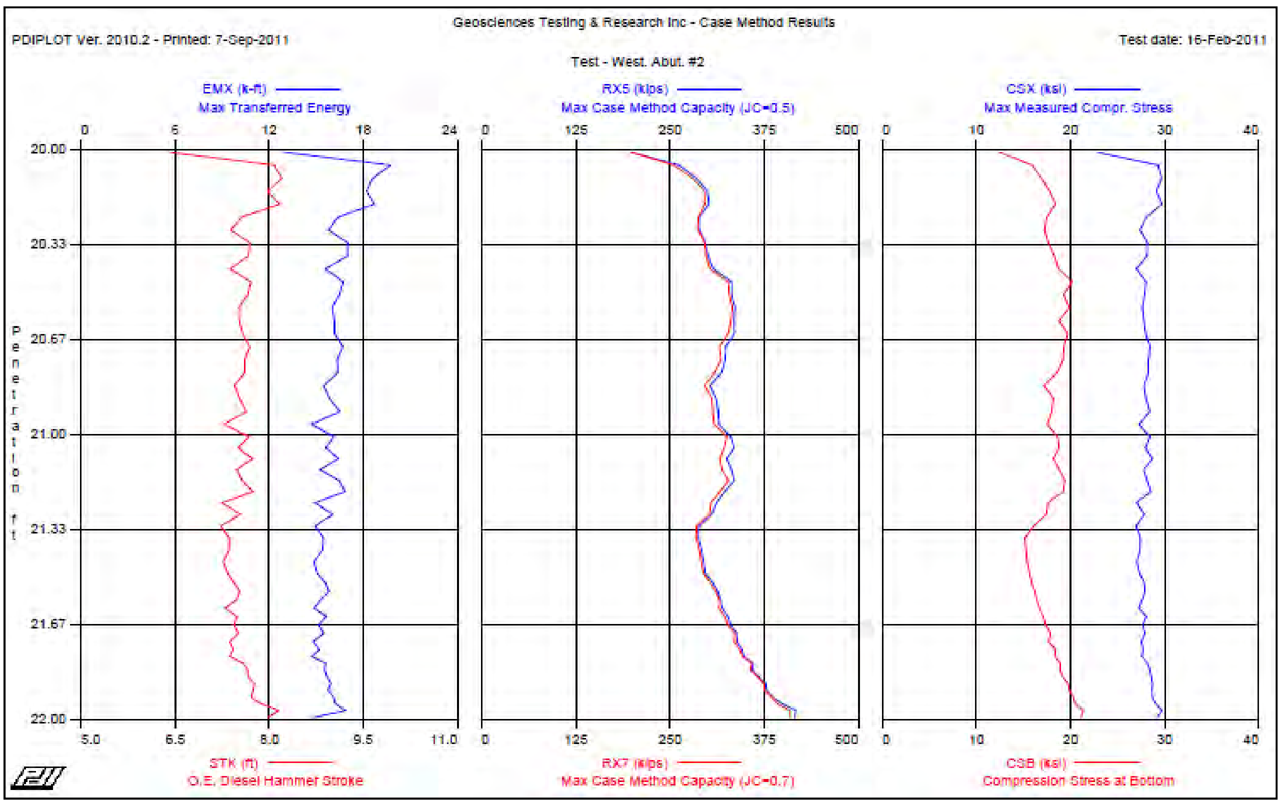


Figure 5. Typical Dynamic Testing summary Output (PDI Plot® Program)

Signal Matching Analyses

Signal matching using the dynamic testing data can be performed to predict the static pile capacity. Programs such as CAPWAP® (developed by Pile Dynamics, Inc.) or TEPWAP/PWAP (developed by GTR) are numerical analyses used to solve the one dimensional wave equation using the measured force and velocity. E.A Smith (1960) suggested modeling the hammer-pile-soil system for use in the wave equation by a series of masses, springs and dashpots as shown in Figure 6. The signal matching programs determine the best match between measured and calculated pile top forces and replace the hammer input with the measured force and velocity. The pile is separated into many small segments, often 1 meter in length. The velocity record obtained from the dynamic pile testing transducers is used as input to the top pile segment. The resistance, damping, and quake are the primary soil parameters assigned by the user to each pile segment below grade. The signal matching programs will calculate the displacement, velocity, and stresses (forces) for each pile segment based on the input velocity record and the user assigned soil parameters. These parameters are adjusted and modified in an iterative fashion until the best match is obtained between the force calculated for the pile top segment and the force measured at the pile top during testing. The user assigned soil parameters based on the best match represent the “actual soil conditions”, including the resistance (and therefore pile capacity). This capacity is based on the resistance at the time of the testing. Static load tests are typically conducted several days or weeks after driving. Therefore, restrike tests are recommended to be performed some time after driving to assess time dependent changes in pile capacity, such as setup or relaxation.

New PDA Appendix.docx

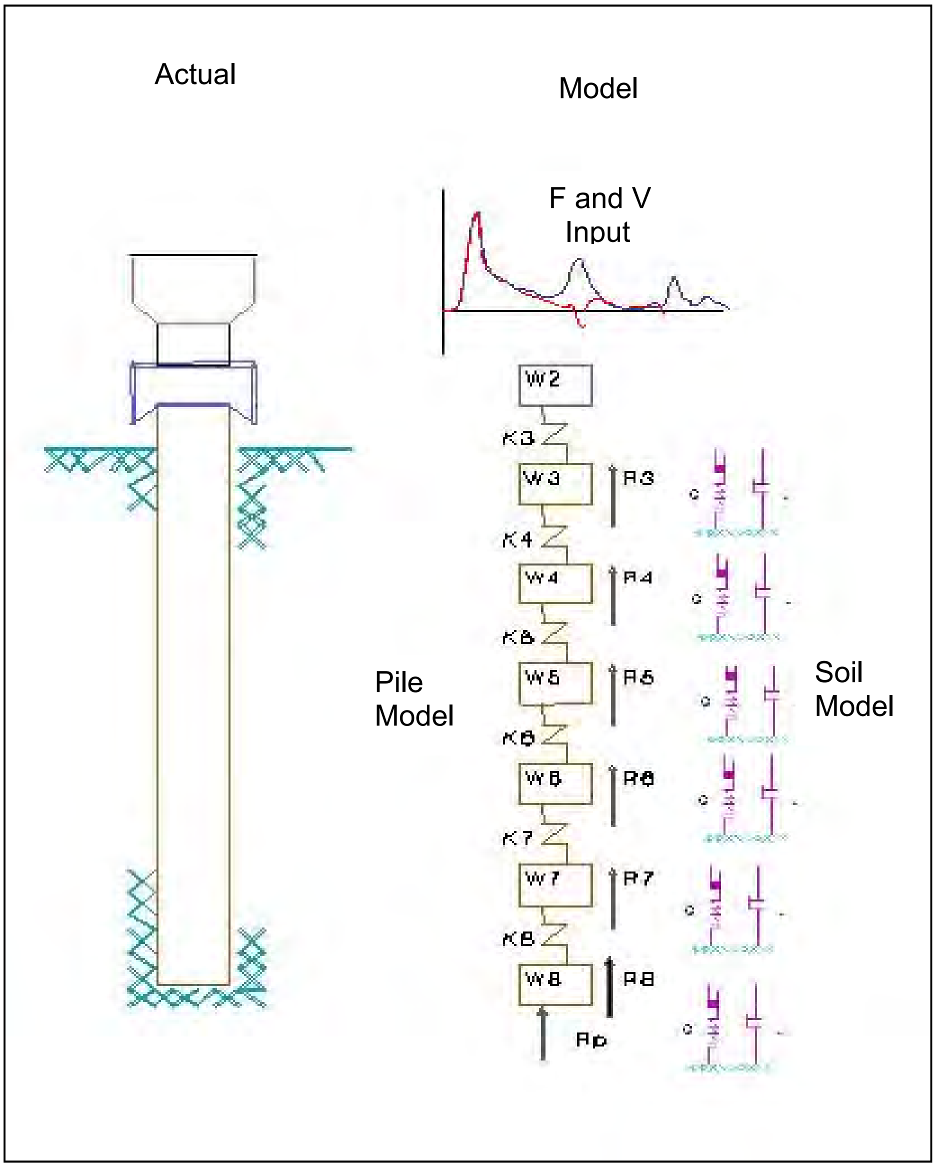


Figure 6. Signal Matching Model (i.e. CAPWAP® or TEPWAP/PWAP).

APPENDIX B
RIG

GEOSCIENCES TESTING AND RESEARCH, INC.
55 Middlesex Street, Suite 225, N. Chelmsford, MA 01863
Ph: (978)251-9395, Fx: (978)251-9396

Project: Cascade Drilling Rig Calibration
Project No: 20.276
Drawn By: DEV
Date: 10/8/2020

GEOSCIENCES TESTING AND RESEARCH, INC.

55 Middlesex Street, Suite 225, N. Chelmsford, MA 01863
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Project: Cascade Drilling Rig Calibration
Project No: 20.276
Drawn By: DEV
Date: 10/8/2020

APPENDIX C
BORING LOG

HALEY ALDRICH

TEST BORING REPORT

BORING NO. HA20-GP-103

PROJECT	NMI- Nuclear Metals Inc.	H&A FILE NO.	131884-003
LOCATION	2229 Main St. Concord, MA	PROJECT MGR.	M. Kelley
CLIENT	de maximis	FIELD REP.	D. M. Palleiko
CONTRACTOR	Cascade Drilling	DATE STARTED	8-Oct-20
DRILLER	D. Lee	DATE FINISHED	14-Oct-20

Elevation ft. | Datum | Boring Location See Plans | PID Model / eV.: None

Item	Casing	Sampler	Core Barrel
Type	6"	S	PQ
Inside Diameter (in.)	5.2	1.375	3.5
Hammer Weight (lb.)	Spun	140	
Hammer Fall (in.)	'-	30"	

Rig Make & Model: Boart Longyear C100 1423

☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Casing Advance Type Method Depth
☐ ATV	☐ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Sonic 6x4 - 92.0'
☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	4" sample barrel to 142.0'
☐ Skid	☑ Sonic	☑ Cutting Head			

Drilling Notes:

Depth (ft.) Below Mudline	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0							Note: this boring is a located 11' east of location 102A and 22' East of HA20-GP-101. Part of a seismic shear wave triplet										
							Samples collected during auto hammer calibration check										
5																	
10																	
15																	
20																	
25																	
30	7 13 15 13	S1 R=22"				SM	S1: Medium dense, tan silty SAND (SM) mps= 0.05", no structure, no odor, moist										

DRAFT

Water Level Data				
Date Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole	Water
10/7/20 0700	10.0	55.0	56.0	46.15

Sample ID: O Open End Rod; T Thin Wall Tube; U Undisturbed Sample; S Split Spoon Sample; G Geoprobe

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Summary	
Overburden (Linear ft.)	92
Rock Cored (Linear ft.)	50
Number of Samples	S5

BORING NO. HA20-GP-103

Field Tests: Dilatancy: R - Rapid S - Slow N - None; Toughness: L - Low M - Medium H - High; Plasticity: N - Nonplastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Meduim H - High V - Very High

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY ALDRICH

TEST BORING REPORT

BORING NO. HA20-GP-103

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
30																	
	7	S1	30.0														
	13					SM											
	15	R= 22"															
	13		32.0														
	10	S2	32.0														
	10					ML	S2: Medium dense, light brown sandy SILT (ML) mps=0.01", vaguely					35	65	R	L	N	
	12	R= 16"					foliated with reduction spots, no odor, wet										
	14		34.0														
	5	S3	34.0				S3: Medium dense, light brown, sikty SAND (SM) mps=0.05", no					55	45				
35	13					SM	structure, no odor, moist										
	16	R= 20"															
	17		36,0														
	9	S4	37.0			SP	S4: Medium dense, brown, poorly graded SAND (SP) mps= 0.05", no				5	95					
	10						structure, no odor, wet										
	10	R= 14"															
	18		39.0														
	10	S5	39.0			SP	S5: Medoum dense, light brown poorly graded SAND (SP) mps= 0.05",				5	95					
40	11						no structure, no odor, moist										
	11	R= 17"															
	12		41.0'														
							No additional samples collected										
45																	
50																	
55																	
60																	
65																	
70																	

NOTES:

FILE NO. 131884-003 BORING NO. HA20-GP-103

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY ALDRICH

TEST BORING REPORT

BORING NO. HA20-GP-103

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
70																	
90					92.0'		Drill action indicates top of Bedrock at 92.0'										
							Advance 50' into bedrock to set 3" ID PVC seismic casing. Lithologic samples collected										
110							Bedrock collected is Assabet Quartz Diorite. No iron stained or weathered zones observed										
130																	
					142.0'		BOE at 142.0'										
150																	

NOTES:

FILE NO. 131884-003 BORING NO. HA20-GP-103

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

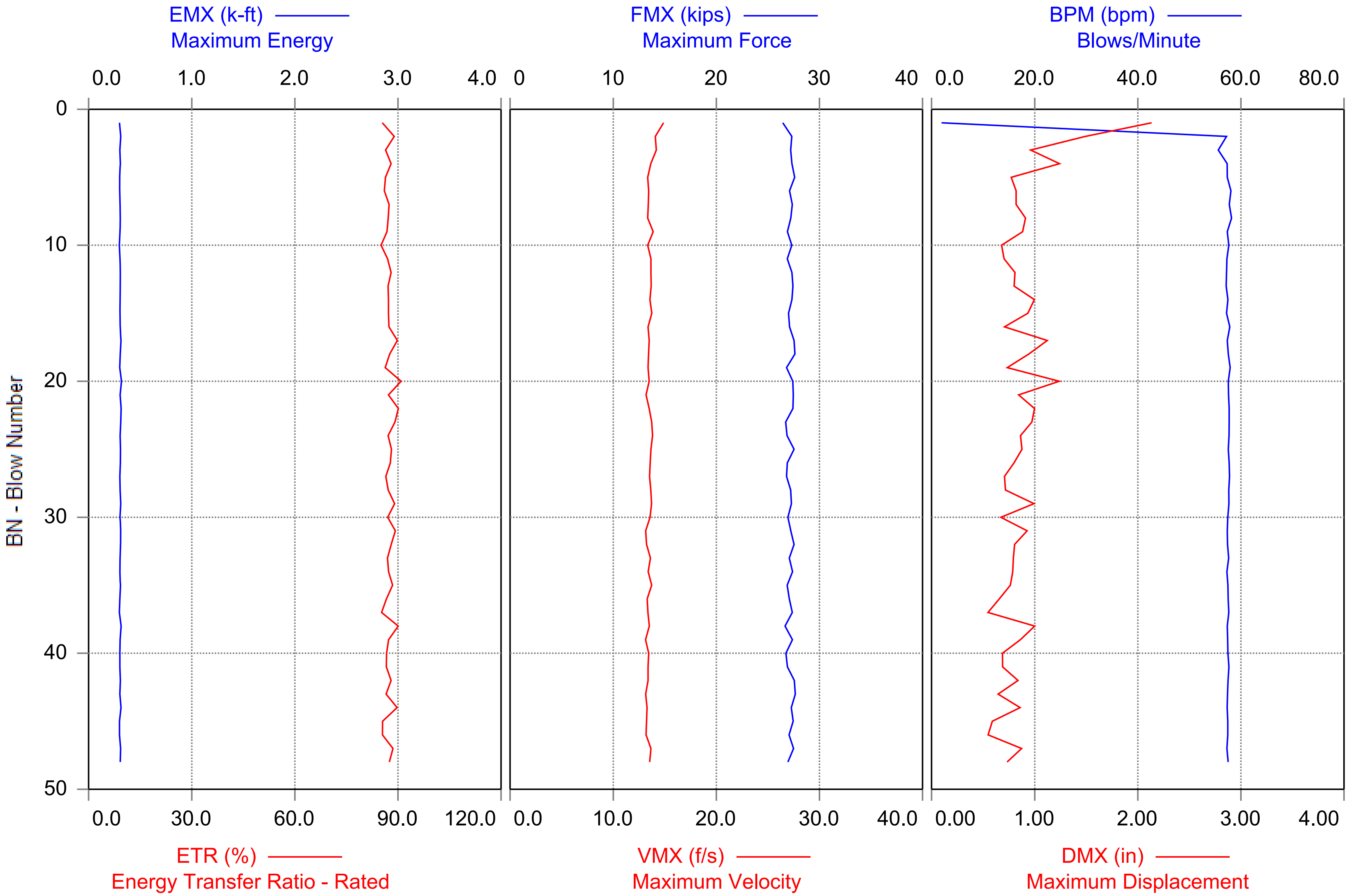
NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

APPENDIX D
PDA DATA

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020 Test started: 08-October-2020

20.276 SPT - 30-32 RIG 2



20.276 SPT - 30-32 RIG 2 — SPT-RIG 2
OP: DEV — Date: 08-October-2020

AR: 1.19 in² — SP: 0.492 k/ft³
LE: 35.80 ft — EM: 30,000 ksi
WS: 16,807.9 f/s — JC: 0.70

EMX: Maximum Energy — DMX: Maximum Displacement
ETR: Energy Transfer Ratio - Rated — DFN: Final Displacement
FMX: Maximum Force — EF2: Energy of F² (ASTM D4633)
VMX: Maximum Velocity — AMX: Maximum Acceleration
BPM: Blows/Minute

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
1	36.00	0	0.299	85.5	26.4	14.9	1.9	2.13	2.13	0.301	2,022
2	36.00	0	0.311	88.9	27.3	14.1	57.2	1.49	1.49	0.304	2,093
3	36.00	0	0.302	86.4	27.2	14.2	55.6	0.96	0.95	0.302	2,285
4	36.00	0	0.308	88.0	27.3	13.6	57.3	1.24	1.24	0.305	2,150
5	36.00	0	0.302	86.4	27.6	13.3	57.4	0.77	0.77	0.306	2,356
6	36.00	0	0.301	86.0	27.1	13.4	58.1	0.82	0.81	0.305	2,365
7	36.00	0	0.306	87.4	27.4	13.4	57.7	0.82	0.82	0.305	2,327
8	36.00	0	0.305	87.1	27.2	13.3	58.2	0.91	0.89	0.303	2,269
9	36.00	0	0.304	86.8	26.9	13.9	57.4	0.88	0.87	0.304	2,343
10	36.00	0	0.298	85.1	27.3	13.3	57.6	0.68	0.64	0.303	2,106
11	36.00	0	0.304	87.0	26.9	13.7	57.3	0.70	0.63	0.305	2,392
12	36.00	0	0.308	88.0	27.3	13.7	57.2	0.81	0.80	0.303	2,161
13	36.00	0	0.305	87.1	27.4	13.7	57.1	0.80	0.79	0.304	2,056
14	36.00	0	0.305	87.2	27.3	13.6	57.5	1.00	0.98	0.300	2,263
15	36.00	0	0.305	87.2	27.0	13.7	57.2	0.93	0.93	0.304	2,355
16	36.00	0	0.306	87.4	27.1	13.4	57.8	0.71	0.70	0.304	2,516
17	36.00	0	0.314	89.8	27.5	13.5	57.4	1.12	1.12	0.306	2,424
18	36.00	0	0.307	87.6	27.6	13.4	57.6	0.94	0.94	0.307	2,290
19	36.00	0	0.302	86.3	26.8	13.4	57.9	0.73	0.73	0.300	2,494
20	36.00	0	0.318	90.9	27.4	13.5	57.6	1.24	1.24	0.303	2,478
21	36.00	0	0.305	87.2	27.5	13.2	57.6	0.84	0.84	0.305	2,463
22	36.00	0	0.315	90.1	27.4	13.5	57.7	1.00	1.00	0.307	2,383
23	36.00	0	0.312	89.1	26.7	13.7	57.7	0.97	0.97	0.305	2,401
24	36.00	0	0.305	87.1	26.9	13.8	57.7	0.86	0.86	0.302	2,363
25	36.00	0	0.308	88.1	27.5	13.7	57.6	0.88	0.88	0.305	2,329
26	36.00	0	0.307	87.8	26.9	13.6	57.7	0.80	0.80	0.305	2,485
27	36.00	0	0.303	86.5	26.8	13.5	57.8	0.71	0.71	0.303	2,371
28	36.00	0	0.305	87.1	27.2	13.6	57.6	0.72	0.70	0.304	2,192
29	36.00	0	0.312	89.0	27.3	13.7	57.7	0.99	0.99	0.303	2,089
30	36.00	0	0.304	87.0	26.9	13.6	57.4	0.67	0.67	0.301	2,309
31	36.00	0	0.312	89.2	27.2	13.1	57.4	0.93	0.93	0.303	2,495
32	36.00	0	0.308	88.0	27.5	13.2	57.4	0.80	0.80	0.304	2,522
33	36.00	0	0.304	86.9	27.1	13.6	57.6	0.79	0.79	0.303	2,313
34	36.00	0	0.305	87.3	27.4	13.4	57.3	0.79	0.79	0.303	2,204
35	36.00	0	0.310	88.4	26.9	13.7	57.5	0.76	0.76	0.302	2,392
36	36.00	0	0.303	86.6	27.1	13.3	57.5	0.66	0.65	0.301	2,459
37	36.00	0	0.298	85.2	27.4	13.4	57.6	0.55	0.55	0.298	2,097
38	36.00	0	0.315	90.1	26.7	13.5	57.4	1.00	1.00	0.301	2,437
39	36.00	0	0.305	87.3	27.4	13.1	57.4	0.86	0.86	0.303	2,480
40	36.00	0	0.303	86.7	26.7	13.4	57.5	0.69	0.69	0.306	2,465
41	36.00	0	0.303	86.6	26.9	13.4	57.7	0.69	0.69	0.304	2,497
42	36.00	0	0.308	88.0	27.6	13.4	57.5	0.84	0.84	0.301	2,356
43	36.00	0	0.303	86.5	27.7	13.2	57.4	0.64	0.64	0.304	2,445
44	36.00	0	0.314	89.7	27.3	13.3	57.3	0.86	0.86	0.303	2,513
45	36.00	0	0.299	85.5	27.5	13.2	57.4	0.59	0.59	0.301	2,293

20.276 SPT - 30-32 RIG 2
OP: DEV

SPT-RIG 2
Date: 08-October-2020

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
46	36.00	0	0.299	85.5	27.1	13.2	57.4	0.55	0.52	0.303	2,457
47	36.00	0	0.310	88.6	27.5	13.7	57.3	0.87	0.87	0.304	2,121
48	36.00	0	0.306	87.5	26.9	13.5	57.5	0.73	0.72	0.304	2,414
		Average	0.306	87.5	27.2	13.5	56.3	0.87	0.86	0.303	2,335
		Std. Dev.	0.005	1.3	0.3	0.3	7.9	0.26	0.26	0.002	139
		Maximum	0.318	90.9	27.7	14.9	58.2	2.13	2.13	0.307	2,522
		Minimum	0.298	85.1	26.4	13.1	1.9	0.55	0.52	0.298	2,022

Total number of blows analyzed: 48

BL# Sensors

1-48 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

Time Summary

Drive 49 seconds 9:57 AM - 9:58 AM BN 1 - 48

20.276 SPT - 30-32 RIG 2 SPT-RIG 2
OP: DEV Date: 08-October-2020

AR: 1.19 in² SP: 0.492 k/ft³
LE: 35.80 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
8	36.00	0.305	87.1	27.2	13.3	58.2	0.91	0.89	0.303	2,269
9	36.00	0.304	86.8	26.9	13.9	57.4	0.88	0.87	0.304	2,343
10	36.00	0.298	85.1	27.3	13.3	57.6	0.68	0.64	0.303	2,106
11	36.00	0.304	87.0	26.9	13.7	57.3	0.70	0.63	0.305	2,392
12	36.00	0.308	88.0	27.3	13.7	57.2	0.81	0.80	0.303	2,161
13	36.00	0.305	87.1	27.4	13.7	57.1	0.80	0.79	0.304	2,056
14	36.00	0.305	87.2	27.3	13.6	57.5	1.00	0.98	0.300	2,263
15	36.00	0.305	87.2	27.0	13.7	57.2	0.93	0.93	0.304	2,355
16	36.00	0.306	87.4	27.1	13.4	57.8	0.71	0.70	0.304	2,516
17	36.00	0.314	89.8	27.5	13.5	57.4	1.12	1.12	0.306	2,424
18	36.00	0.307	87.6	27.6	13.4	57.6	0.94	0.94	0.307	2,290
19	36.00	0.302	86.3	26.8	13.4	57.9	0.73	0.73	0.300	2,494
20	36.00	0.318	90.9	27.4	13.5	57.6	1.24	1.24	0.303	2,478
21	36.00	0.305	87.2	27.5	13.2	57.6	0.84	0.84	0.305	2,463
22	36.00	0.315	90.1	27.4	13.5	57.7	1.00	1.00	0.307	2,383
23	36.00	0.312	89.1	26.7	13.7	57.7	0.97	0.97	0.305	2,401
24	36.00	0.305	87.1	26.9	13.8	57.7	0.86	0.86	0.302	2,363
25	36.00	0.308	88.1	27.5	13.7	57.6	0.88	0.88	0.305	2,329
26	36.00	0.307	87.8	26.9	13.6	57.7	0.80	0.80	0.305	2,485
27	36.00	0.303	86.5	26.8	13.5	57.8	0.71	0.71	0.303	2,371
28	36.00	0.305	87.1	27.2	13.6	57.6	0.72	0.70	0.304	2,192
29	36.00	0.312	89.0	27.3	13.7	57.7	0.99	0.99	0.303	2,089
30	36.00	0.304	87.0	26.9	13.6	57.4	0.67	0.67	0.301	2,309
31	36.00	0.312	89.2	27.2	13.1	57.4	0.93	0.93	0.303	2,495
32	36.00	0.308	88.0	27.5	13.2	57.4	0.80	0.80	0.304	2,522
33	36.00	0.304	86.9	27.1	13.6	57.6	0.79	0.79	0.303	2,313
34	36.00	0.305	87.3	27.4	13.4	57.3	0.79	0.79	0.303	2,204
35	36.00	0.310	88.4	26.9	13.7	57.5	0.76	0.76	0.302	2,392
	Average	0.307	87.7	27.2	13.5	57.5	0.86	0.85	0.304	2,338
	Std. Dev.	0.004	1.2	0.3	0.2	0.2	0.13	0.14	0.002	130
	Maximum	0.318	90.9	27.6	13.9	58.2	1.24	1.24	0.307	2,522
	Minimum	0.298	85.1	26.7	13.1	57.1	0.67	0.63	0.300	2,056

Total number of blows analyzed: 28

BL# Sensors

1-48 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

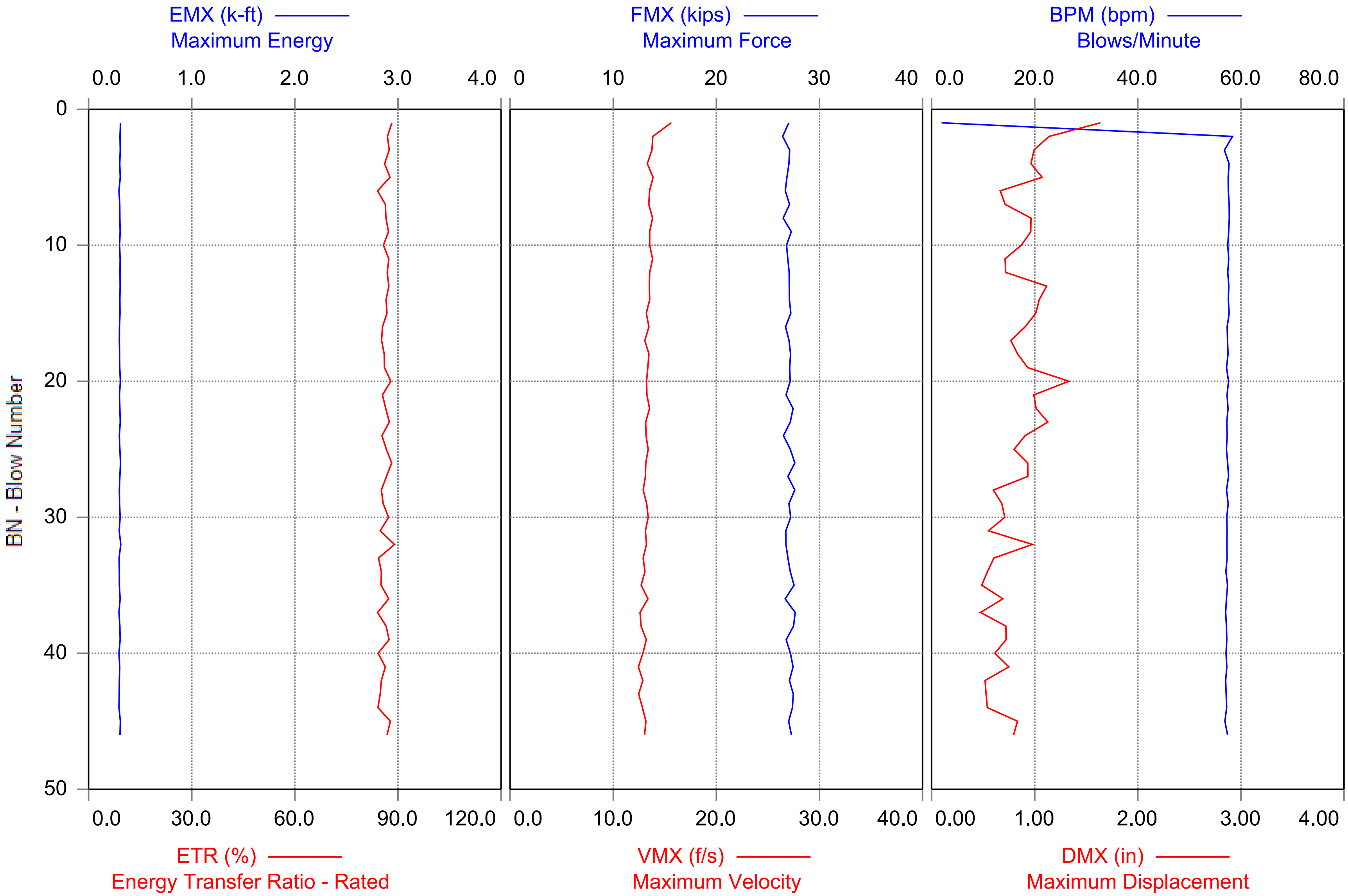
Time Summary

Drive 49 seconds 9:57 AM - 9:58 AM BN 1 - 48

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020 Test started: 08-October-2020

20.276 SPT - 32-34 RIG 2



20.276 SPT - 32-34 RIG 2 SPT-RIG 2
OP: DEV Date: 08-October-2020

AR: 1.19 in² SP: 0.492 k/ft³
LE: 37.80 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

EMX: Maximum Energy DMX: Maximum Displacement
ETR: Energy Transfer Ratio - Rated DFN: Final Displacement
FMX: Maximum Force EF2: Energy of F² (ASTM D4633)
VMX: Maximum Velocity AMX: Maximum Acceleration
BPM: Blows/Minute

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
1	36.00	0	0.309	88.2	27.0	15.6	1.9	1.64	1.64	0.307	1,990
2	36.00	0	0.304	86.9	26.4	13.8	58.4	1.14	1.14	0.297	2,512
3	36.00	0	0.306	87.5	27.1	13.8	56.8	0.99	0.99	0.298	2,371
4	36.00	0	0.301	86.1	27.0	13.3	57.7	0.96	0.96	0.296	2,410
5	36.00	0	0.307	87.7	26.8	13.9	57.5	1.07	1.07	0.296	2,173
6	36.00	0	0.294	84.1	26.7	13.5	57.6	0.67	0.66	0.294	2,309
7	36.00	0	0.302	86.3	27.1	13.5	57.7	0.71	0.69	0.296	2,481
8	36.00	0	0.303	86.5	26.5	13.8	57.7	0.96	0.96	0.292	2,232
9	36.00	0	0.305	87.2	27.3	13.5	57.6	0.96	0.96	0.297	2,414
10	36.00	0	0.300	85.8	26.8	13.5	57.4	0.87	0.87	0.294	2,331
11	36.00	0	0.306	87.3	26.9	13.8	57.6	0.71	0.68	0.298	2,155
12	36.00	0	0.304	86.9	27.1	13.5	57.4	0.72	0.66	0.293	2,242
13	36.00	0	0.306	87.3	27.1	13.5	57.6	1.12	1.11	0.296	2,194
14	36.00	0	0.303	86.5	27.1	13.5	57.6	1.04	1.03	0.297	2,107
15	36.00	0	0.304	86.8	27.2	13.2	57.7	1.01	1.01	0.296	2,425
16	36.00	0	0.299	85.5	26.7	13.5	57.3	0.91	0.90	0.294	2,207
17	36.00	0	0.298	85.2	27.1	13.1	57.4	0.77	0.76	0.294	2,370
18	36.00	0	0.301	86.0	27.2	13.5	57.5	0.83	0.82	0.299	2,186
19	36.00	0	0.301	86.0	27.1	13.3	57.2	0.93	0.89	0.297	2,217
20	36.00	0	0.308	87.9	27.2	13.2	57.6	1.33	1.33	0.297	2,474
21	36.00	0	0.299	85.5	26.8	13.3	57.3	0.99	0.99	0.301	2,423
22	36.00	0	0.303	86.4	27.4	13.5	57.5	1.01	1.01	0.297	1,988
23	36.00	0	0.306	87.5	27.2	13.1	57.3	1.13	1.13	0.296	2,073
24	36.00	0	0.299	85.3	26.5	13.2	57.3	0.91	0.91	0.295	2,190
25	36.00	0	0.303	86.6	27.2	13.4	57.2	0.80	0.80	0.303	2,271
26	36.00	0	0.309	88.2	27.6	13.2	57.4	0.93	0.93	0.299	2,106
27	36.00	0	0.303	86.6	26.9	13.1	57.6	0.93	0.93	0.298	2,376
28	36.00	0	0.298	85.2	27.6	12.9	57.2	0.60	0.60	0.301	2,247
29	36.00	0	0.300	85.7	27.0	13.2	57.5	0.68	0.68	0.299	2,102
30	36.00	0	0.305	87.3	27.2	13.4	57.3	0.71	0.71	0.298	2,087
31	36.00	0	0.297	84.8	26.7	13.1	57.3	0.55	0.51	0.299	2,323
32	36.00	0	0.311	89.0	26.7	13.2	57.3	0.98	0.98	0.299	2,285
33	36.00	0	0.295	84.3	26.9	12.9	57.3	0.60	0.57	0.294	1,963
34	36.00	0	0.298	85.1	27.2	13.1	57.1	0.54	0.51	0.298	2,014
35	36.00	0	0.298	85.1	27.5	12.7	57.4	0.49	0.42	0.300	2,330
36	36.00	0	0.306	87.3	26.7	13.4	57.2	0.69	0.66	0.298	2,312
37	36.00	0	0.294	84.1	27.6	12.6	57.0	0.48	0.41	0.299	2,388
38	36.00	0	0.303	86.6	27.5	12.7	57.2	0.72	0.71	0.299	2,323
39	36.00	0	0.306	87.4	26.8	13.2	57.3	0.72	0.70	0.297	2,284
40	36.00	0	0.295	84.2	27.2	12.9	57.1	0.61	0.60	0.296	2,020
41	36.00	0	0.302	86.3	27.4	12.4	57.3	0.75	0.71	0.296	2,149
42	36.00	0	0.298	85.1	27.1	12.9	57.0	0.52	0.46	0.298	2,043
43	36.00	0	0.297	84.8	27.5	12.5	57.1	0.53	0.43	0.297	2,328
44	36.00	0	0.295	84.2	27.4	12.8	57.2	0.54	0.49	0.294	2,253
45	36.00	0	0.307	87.8	27.0	13.2	56.9	0.83	0.83	0.300	2,334

20.276 SPT - 32-34 RIG 2
OP: DEV

SPT-RIG 2
Date: 08-October-2020

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
46	36.00	0	0.304	86.8	27.3	13.0	57.4	0.80	0.79	0.296	2,028
		Average	0.302	86.3	27.1	13.3	56.2	0.83	0.82	0.297	2,240
		Std. Dev.	0.004	1.2	0.3	0.5	8.1	0.23	0.25	0.003	145
		Maximum	0.311	89.0	27.6	15.6	58.4	1.64	1.64	0.307	2,512
		Minimum	0.294	84.1	26.4	12.4	1.9	0.48	0.41	0.292	1,963

Total number of blows analyzed: 46

BL# Sensors

1-46 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

Time Summary

Drive 47 seconds 10:19 AM - 10:20 AM BN 1 - 46

20.276 SPT - 32-34 RIG 2
OP: DEV

SPT-RIG 2
Date: 08-October-2020

AR: 1.19 in²
LE: 37.80 ft
WS: 16,807.9 f/s

SP: 0.492 k/ft³
EM: 30,000 ksi
JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute

DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
11	36.00	0.306	87.3	26.9	13.8	57.6	0.71	0.68	0.298	2,155
12	36.00	0.304	86.9	27.1	13.5	57.4	0.72	0.66	0.293	2,242
13	36.00	0.306	87.3	27.1	13.5	57.6	1.12	1.11	0.296	2,194
14	36.00	0.303	86.5	27.1	13.5	57.6	1.04	1.03	0.297	2,107
15	36.00	0.304	86.8	27.2	13.2	57.7	1.01	1.01	0.296	2,425
16	36.00	0.299	85.5	26.7	13.5	57.3	0.91	0.90	0.294	2,207
17	36.00	0.298	85.2	27.1	13.1	57.4	0.77	0.76	0.294	2,370
18	36.00	0.301	86.0	27.2	13.5	57.5	0.83	0.82	0.299	2,186
19	36.00	0.301	86.0	27.1	13.3	57.2	0.93	0.89	0.297	2,217
20	36.00	0.308	87.9	27.2	13.2	57.6	1.33	1.33	0.297	2,474
21	36.00	0.299	85.5	26.8	13.3	57.3	0.99	0.99	0.301	2,423
22	36.00	0.303	86.4	27.4	13.5	57.5	1.01	1.01	0.297	1,988
23	36.00	0.306	87.5	27.2	13.1	57.3	1.13	1.13	0.296	2,073
24	36.00	0.299	85.3	26.5	13.2	57.3	0.91	0.91	0.295	2,190
25	36.00	0.303	86.6	27.2	13.4	57.2	0.80	0.80	0.303	2,271
26	36.00	0.309	88.2	27.6	13.2	57.4	0.93	0.93	0.299	2,106
27	36.00	0.303	86.6	26.9	13.1	57.6	0.93	0.93	0.298	2,376
28	36.00	0.298	85.2	27.6	12.9	57.2	0.60	0.60	0.301	2,247
29	36.00	0.300	85.7	27.0	13.2	57.5	0.68	0.68	0.299	2,102
30	36.00	0.305	87.3	27.2	13.4	57.3	0.71	0.71	0.298	2,087
31	36.00	0.297	84.8	26.7	13.1	57.3	0.55	0.51	0.299	2,323
32	36.00	0.311	89.0	26.7	13.2	57.3	0.98	0.98	0.299	2,285
	Average	0.303	86.5	27.1	13.3	57.4	0.89	0.88	0.298	2,229
	Std. Dev.	0.004	1.1	0.3	0.2	0.2	0.18	0.19	0.002	126
	Maximum	0.311	89.0	27.6	13.8	57.7	1.33	1.33	0.303	2,474
	Minimum	0.297	84.8	26.5	12.9	57.2	0.55	0.51	0.293	1,988

Total number of blows analyzed: 22

BL# Sensors

1-46 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

Time Summary

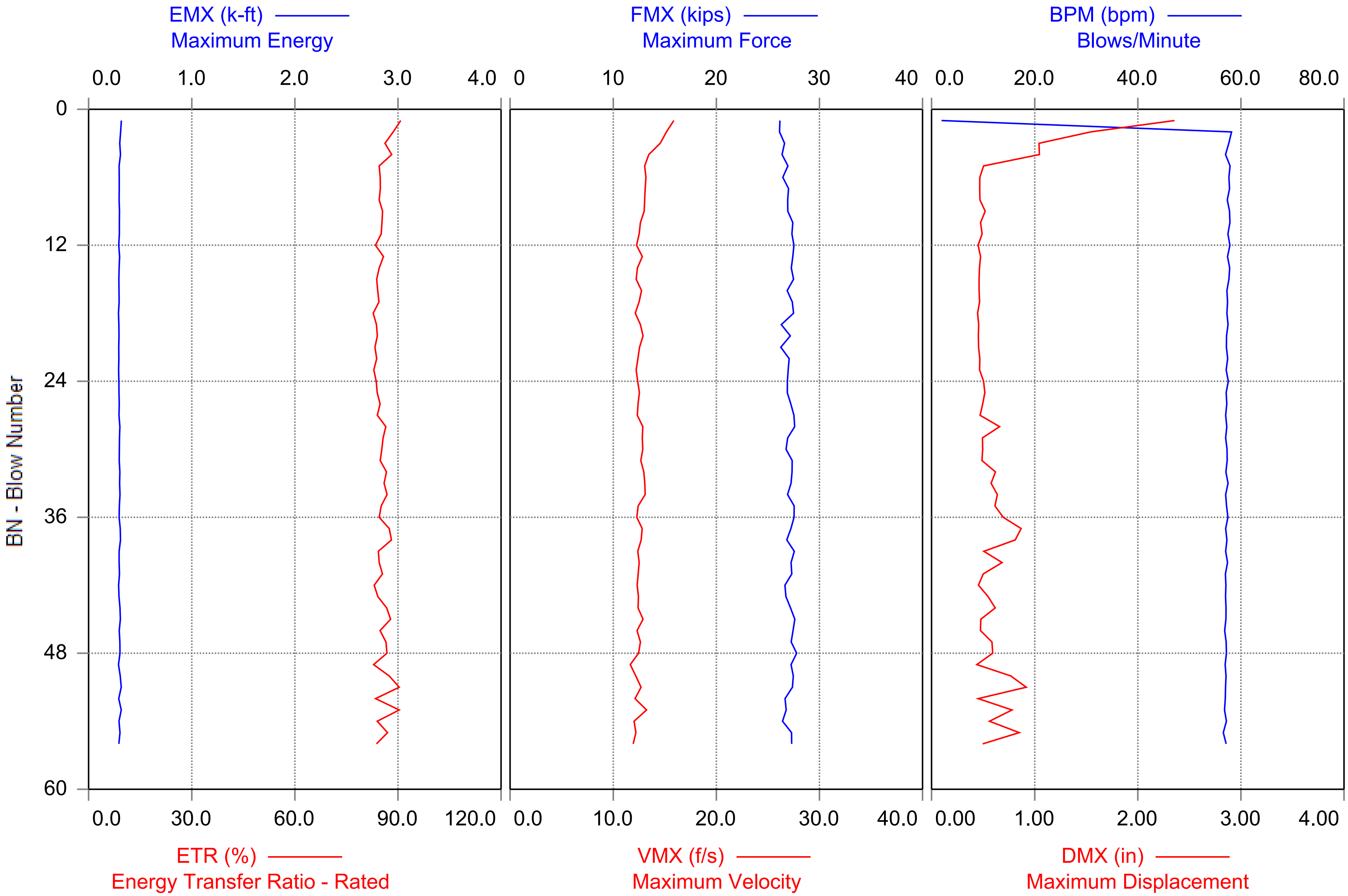
Drive 47 seconds 10:19 AM - 10:20 AM BN 1 - 46

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020

Test started: 08-October-2020

20.276 SPT - 34-36 RIG 2



20.276 SPT - 34-36 RIG 2 SPT-RIG 2
OP: DEV Date: 08-October-2020

AR:	1.19 in²	SP:	0.492 k/ft³
LE:	38.80 ft	EM:	30,000 ksi
WS:	16,807.9 f/s	JC:	0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
1	36.00	0	0.318	90.8	26.2	15.9	1.9	2.36	2.36	0.298	2,254
2	36.00	0	0.310	88.6	26.1	15.2	58.2	1.54	1.54	0.301	2,492
3	36.00	0	0.302	86.2	26.6	14.6	57.6	1.04	1.04	0.302	2,183
4	36.00	0	0.309	88.2	26.4	13.5	57.0	1.04	1.04	0.302	2,397
5	36.00	0	0.296	84.5	26.9	13.0	57.9	0.50	0.49	0.300	2,229
6	36.00	0	0.297	84.8	26.4	13.2	57.7	0.47	0.27	0.301	2,385
7	36.00	0	0.297	84.9	27.0	13.1	57.8	0.47	0.22	0.302	1,950
8	36.00	0	0.296	84.6	26.9	13.1	57.4	0.47	0.23	0.300	2,102
9	36.00	0	0.299	85.5	26.9	13.0	57.8	0.52	0.51	0.304	2,173
10	36.00	0	0.299	85.3	27.4	12.6	57.9	0.47	0.37	0.297	2,379
11	36.00	0	0.298	85.1	27.3	12.5	57.5	0.49	0.49	0.299	2,342
12	36.00	0	0.292	83.4	27.5	12.3	57.9	0.45	0.25	0.297	2,422
13	36.00	0	0.300	85.8	27.4	12.8	57.4	0.47	0.34	0.300	2,170
14	36.00	0	0.296	84.6	27.3	12.3	57.8	0.46	0.19	0.299	2,255
15	36.00	0	0.293	83.8	27.5	12.2	57.7	0.46	0.30	0.301	2,441
16	36.00	0	0.294	84.1	26.9	12.7	57.3	0.46	0.16	0.296	2,145
17	36.00	0	0.296	84.4	27.4	12.5	57.4	0.47	0.32	0.298	2,217
18	36.00	0	0.290	82.8	27.5	12.1	57.3	0.45	0.25	0.300	2,369
19	36.00	0	0.293	83.7	26.3	12.6	57.5	0.46	0.42	0.296	2,180
20	36.00	0	0.294	84.0	27.2	12.9	57.2	0.45	0.28	0.299	2,194
21	36.00	0	0.292	83.3	26.3	12.6	57.2	0.46	0.44	0.297	2,186
22	36.00	0	0.293	83.8	27.1	12.4	57.4	0.47	0.46	0.301	1,934
23	36.00	0	0.290	83.0	27.0	12.2	57.1	0.46	0.46	0.295	2,123
24	36.00	0	0.293	83.7	26.9	12.4	57.6	0.50	0.50	0.296	2,053
25	36.00	0	0.294	84.0	26.9	12.5	57.1	0.52	0.52	0.297	2,056
26	36.00	0	0.297	84.8	27.2	12.4	57.3	0.50	0.42	0.298	1,986
27	36.00	0	0.294	84.0	27.5	12.3	57.0	0.47	0.31	0.299	2,243
28	36.00	0	0.303	86.5	27.6	12.9	57.3	0.66	0.65	0.302	2,330
29	36.00	0	0.300	85.6	26.9	12.8	57.0	0.49	0.38	0.301	2,145
30	36.00	0	0.299	85.3	26.8	12.9	57.3	0.50	0.42	0.300	2,302
31	36.00	0	0.297	84.8	27.3	12.7	57.3	0.49	0.37	0.302	2,281
32	36.00	0	0.303	86.6	27.3	13.0	57.1	0.62	0.55	0.303	1,922
33	36.00	0	0.301	85.9	27.2	13.1	57.5	0.58	0.55	0.301	1,986
34	36.00	0	0.304	86.8	26.9	13.1	57.0	0.64	0.57	0.304	2,154
35	36.00	0	0.298	85.1	27.5	12.4	57.2	0.61	0.55	0.300	2,033
36	36.00	0	0.296	84.5	27.5	12.3	57.5	0.69	0.65	0.302	2,125
37	36.00	0	0.306	87.5	27.2	12.8	57.0	0.87	0.85	0.302	2,295
38	36.00	0	0.308	88.1	26.8	12.7	57.3	0.81	0.77	0.302	2,102
39	36.00	0	0.295	84.3	27.6	12.4	57.0	0.51	0.47	0.303	1,860
40	36.00	0	0.296	84.5	27.2	12.5	57.4	0.68	0.66	0.300	2,237
41	36.00	0	0.299	85.5	27.3	12.4	57.0	0.50	0.45	0.301	1,787
42	36.00	0	0.291	83.1	26.6	12.3	57.1	0.45	0.36	0.301	2,081
43	36.00	0	0.294	84.1	26.7	12.4	57.0	0.55	0.55	0.300	2,218
44	36.00	0	0.304	86.7	27.2	12.4	57.1	0.62	0.60	0.304	2,089
45	36.00	0	0.308	87.9	27.6	12.9	57.1	0.48	0.43	0.303	2,396

20.276 SPT - 34-36 RIG 2 SPT-RIG 2
OP: DEV Date: 08-October-2020

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
46	36.00	0	0.297	84.8	27.4	12.3	56.8	0.47	0.41	0.301	1,998
47	36.00	0	0.303	86.5	27.3	12.6	57.1	0.59	0.54	0.303	1,963
48	36.00	0	0.304	86.8	27.8	12.5	57.2	0.59	0.59	0.305	2,234
49	36.00	0	0.290	82.9	27.2	11.7	56.9	0.44	0.24	0.302	1,858
50	36.00	0	0.306	87.4	27.5	12.2	57.1	0.77	0.77	0.303	2,060
51	36.00	0	0.316	90.4	27.4	12.7	57.0	0.92	0.92	0.302	2,305
52	36.00	0	0.292	83.5	26.7	12.1	57.0	0.45	0.45	0.303	2,101
53	36.00	0	0.316	90.4	26.8	13.2	56.8	0.78	0.76	0.306	2,088
54	36.00	0	0.294	84.0	26.4	12.0	57.2	0.56	0.56	0.302	2,179
55	36.00	0	0.304	87.0	27.3	12.2	56.6	0.85	0.85	0.301	2,283
56	36.00	0	0.293	83.7	27.3	11.9	57.1	0.50	0.47	0.302	1,935
		Average	0.299	85.4	27.1	12.7	56.3	0.62	0.55	0.301	2,164
		Std. Dev.	0.007	1.9	0.4	0.7	7.3	0.31	0.34	0.002	160
		Maximum	0.318	90.8	27.8	15.9	58.2	2.36	2.36	0.306	2,492
		Minimum	0.290	82.8	26.1	11.7	1.9	0.44	0.16	0.295	1,787

Total number of blows analyzed: 56

BL# Sensors

1-56 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

Time Summary

Drive 57 seconds 10:39 AM - 10:40 AM BN 1 - 56

20.276 SPT - 34-36 RIG 2 — SPT-RIG 2
OP: DEV — Date: 08-October-2020

AR: 1.19 in² SP: 0.492 k/ft³
LE: 38.80 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
6	36.00	0.297	84.8	26.4	13.2	57.7	0.47	0.27	0.301	2,385
7	36.00	0.297	84.9	27.0	13.1	57.8	0.47	0.22	0.302	1,950
8	36.00	0.296	84.6	26.9	13.1	57.4	0.47	0.23	0.300	2,102
9	36.00	0.299	85.5	26.9	13.0	57.8	0.52	0.51	0.304	2,173
10	36.00	0.299	85.3	27.4	12.6	57.9	0.47	0.37	0.297	2,379
11	36.00	0.298	85.1	27.3	12.5	57.5	0.49	0.49	0.299	2,342
12	36.00	0.292	83.4	27.5	12.3	57.9	0.45	0.25	0.297	2,422
13	36.00	0.300	85.8	27.4	12.8	57.4	0.47	0.34	0.300	2,170
14	36.00	0.296	84.6	27.3	12.3	57.8	0.46	0.19	0.299	2,255
15	36.00	0.293	83.8	27.5	12.2	57.7	0.46	0.30	0.301	2,441
16	36.00	0.294	84.1	26.9	12.7	57.3	0.46	0.16	0.296	2,145
17	36.00	0.296	84.4	27.4	12.5	57.4	0.47	0.32	0.298	2,217
18	36.00	0.290	82.8	27.5	12.1	57.3	0.45	0.25	0.300	2,369
19	36.00	0.293	83.7	26.3	12.6	57.5	0.46	0.42	0.296	2,180
20	36.00	0.294	84.0	27.2	12.9	57.2	0.45	0.28	0.299	2,194
21	36.00	0.292	83.3	26.3	12.6	57.2	0.46	0.44	0.297	2,186
22	36.00	0.293	83.8	27.1	12.4	57.4	0.47	0.46	0.301	1,934
23	36.00	0.290	83.0	27.0	12.2	57.1	0.46	0.46	0.295	2,123
24	36.00	0.293	83.7	26.9	12.4	57.6	0.50	0.50	0.296	2,053
25	36.00	0.294	84.0	26.9	12.5	57.1	0.52	0.52	0.297	2,056
26	36.00	0.297	84.8	27.2	12.4	57.3	0.50	0.42	0.298	1,986
27	36.00	0.294	84.0	27.5	12.3	57.0	0.47	0.31	0.299	2,243
28	36.00	0.303	86.5	27.6	12.9	57.3	0.66	0.65	0.302	2,330
29	36.00	0.300	85.6	26.9	12.8	57.0	0.49	0.38	0.301	2,145
30	36.00	0.299	85.3	26.8	12.9	57.3	0.50	0.42	0.300	2,302
31	36.00	0.297	84.8	27.3	12.7	57.3	0.49	0.37	0.302	2,281
32	36.00	0.303	86.6	27.3	13.0	57.1	0.62	0.55	0.303	1,922
33	36.00	0.301	85.9	27.2	13.1	57.5	0.58	0.55	0.301	1,986
34	36.00	0.304	86.8	26.9	13.1	57.0	0.64	0.57	0.304	2,154
	Average	0.296	84.7	27.1	12.7	57.4	0.50	0.39	0.300	2,187
	Std. Dev.	0.004	1.1	0.4	0.3	0.3	0.06	0.13	0.003	147
	Maximum	0.304	86.8	27.6	13.2	57.9	0.66	0.65	0.304	2,441
	Minimum	0.290	82.8	26.3	12.1	57.0	0.45	0.16	0.295	1,922

Total number of blows analyzed: 29

BL#	Sensors
1-56	F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00); A4: [K10400] 342.0 (1.00)

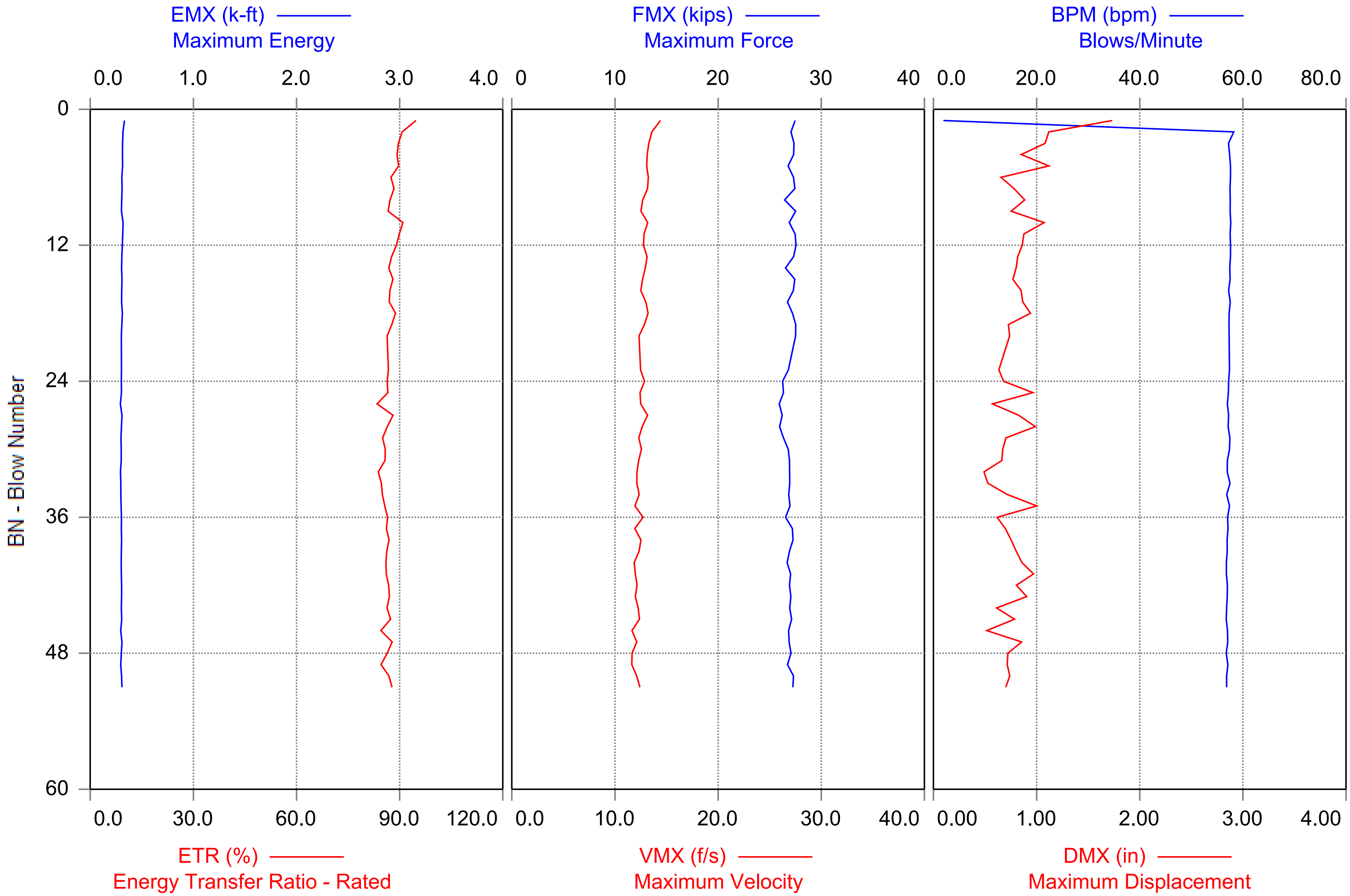
Time Summary

Drive 57 seconds 10:39 AM - 10:40 AM BN 1 - 56

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020 Test started: 08-October-2020

20.276 SPT - 37-39 RIG 2



20.276 SPT - 37-39 RIG 2 — SPT-RIG 2
OP: DEV — Date: 08-October-2020

AR: 1.19 in² — SP: 0.492 k/ft³
LE: 40.80 ft — EM: 30,000 ksi
WS: 16,807.9 f/s — JC: 0.70

EMX: Maximum Energy — DMX: Maximum Displacement
ETR: Energy Transfer Ratio - Rated — DFN: Final Displacement
FMX: Maximum Force — EF2: Energy of F² (ASTM D4633)
VMX: Maximum Velocity — AMX: Maximum Acceleration
BPM: Blows/Minute

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
1	36.00	0	0.332	94.7	27.5	14.4	1.9	1.73	1.73	0.310	1,922
2	36.00	0	0.318	90.7	27.1	13.6	58.2	1.12	1.12	0.306	2,817
3	36.00	0	0.314	89.6	27.3	13.3	57.2	1.08	1.08	0.303	2,392
4	36.00	0	0.312	89.2	27.3	13.1	57.4	0.85	0.85	0.310	2,429
5	36.00	0	0.314	89.7	26.8	13.1	57.6	1.12	1.12	0.305	2,341
6	36.00	0	0.306	87.4	27.3	13.2	57.6	0.65	0.65	0.305	2,115
7	36.00	0	0.309	88.4	27.4	13.2	57.5	0.78	0.78	0.305	2,239
8	36.00	0	0.305	87.2	26.4	12.7	57.6	0.89	0.88	0.300	2,209
9	36.00	0	0.303	86.6	27.5	12.5	57.5	0.75	0.75	0.304	2,433
10	36.00	0	0.318	90.9	26.9	13.2	57.6	1.07	1.07	0.301	2,078
11	36.00	0	0.315	89.9	27.5	12.8	57.5	0.88	0.87	0.306	2,545
12	36.00	0	0.312	89.0	27.5	12.8	57.6	0.86	0.86	0.306	2,399
13	36.00	0	0.307	87.7	27.3	13.1	57.6	0.82	0.80	0.306	1,988
14	36.00	0	0.304	86.8	26.5	12.9	57.4	0.80	0.78	0.300	2,143
15	36.00	0	0.308	88.0	27.4	12.7	57.5	0.77	0.75	0.303	2,310
16	36.00	0	0.305	87.2	27.3	12.5	57.2	0.85	0.85	0.305	2,398
17	36.00	0	0.304	87.0	26.7	13.0	57.6	0.87	0.86	0.301	2,233
18	36.00	0	0.311	88.8	27.2	13.2	57.3	0.94	0.93	0.302	2,314
19	36.00	0	0.307	87.7	27.5	12.8	57.3	0.73	0.70	0.300	2,512
20	36.00	0	0.302	86.4	27.5	12.3	57.3	0.74	0.73	0.301	2,378
23	36.00	0	0.303	86.7	26.8	12.5	57.4	0.63	0.63	0.304	2,368
24	36.00	0	0.302	86.4	26.2	12.9	57.2	0.68	0.67	0.303	1,982
25	36.00	0	0.303	86.6	26.3	12.4	57.2	0.96	0.95	0.300	2,096
26	36.00	0	0.292	83.4	25.9	12.5	57.0	0.57	0.57	0.299	2,129
27	36.00	0	0.308	88.1	26.2	13.2	57.2	0.83	0.83	0.304	2,074
28	36.00	0	0.302	86.4	26.0	12.6	57.1	0.99	0.99	0.299	2,081
29	36.00	0	0.298	85.0	26.3	12.3	57.5	0.70	0.68	0.299	2,147
30	36.00	0	0.300	85.8	26.8	12.6	57.4	0.67	0.67	0.301	1,928
31	36.00	0	0.300	85.7	26.9	12.3	57.0	0.66	0.65	0.302	1,926
32	36.00	0	0.293	83.8	26.9	12.1	57.0	0.49	0.44	0.303	2,182
33	36.00	0	0.296	84.7	26.9	12.1	57.5	0.53	0.53	0.304	1,808
34	36.00	0	0.297	85.0	26.8	12.3	56.9	0.72	0.72	0.298	1,849
35	36.00	0	0.300	85.7	27.0	11.9	57.4	1.00	1.00	0.298	2,017
36	36.00	0	0.303	86.5	26.5	12.7	57.0	0.62	0.62	0.303	2,104
37	36.00	0	0.301	86.1	27.2	11.9	57.1	0.70	0.70	0.299	2,056
38	36.00	0	0.304	86.9	27.3	12.5	56.9	0.75	0.75	0.305	2,139
39	36.00	0	0.302	86.2	26.9	12.3	57.0	0.80	0.80	0.303	1,931
40	36.00	0	0.301	86.0	26.7	11.9	56.8	0.86	0.86	0.300	1,765
41	36.00	0	0.301	86.1	27.0	12.0	56.8	0.97	0.97	0.300	2,165
42	36.00	0	0.304	86.8	26.9	12.1	57.0	0.80	0.80	0.304	1,896
43	36.00	0	0.305	87.0	27.1	12.0	57.0	0.90	0.90	0.301	1,782
44	36.00	0	0.302	86.3	26.9	12.3	56.8	0.61	0.61	0.303	1,833
45	36.00	0	0.306	87.4	27.1	12.4	56.8	0.79	0.79	0.301	1,881
46	36.00	0	0.296	84.5	26.8	11.6	57.0	0.52	0.52	0.301	1,771
47	36.00	0	0.307	87.8	26.9	12.1	57.1	0.85	0.85	0.299	2,104

20.276 SPT - 37-39 RIG 2
OP: DEV

SPT-RIG 2
Date: 08-October-2020

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
48	36.00	0	0.302	86.4	27.1	11.7	56.8	0.72	0.72	0.302	2,015
49	36.00	0	0.296	84.6	26.7	11.6	57.1	0.71	0.70	0.297	1,838
50	36.00	0	0.304	86.9	27.3	12.1	56.8	0.74	0.74	0.303	2,243
51	36.00	0	0.307	87.8	27.2	12.4	56.8	0.70	0.70	0.303	2,138
		Average	0.305	87.1	27.0	12.6	56.1	0.81	0.81	0.302	2,132
		Std. Dev.	0.007	2.0	0.4	0.5	7.8	0.20	0.20	0.003	229
		Maximum	0.332	94.7	27.5	14.4	58.2	1.73	1.73	0.310	2,817
		Minimum	0.292	83.4	25.9	11.6	1.9	0.49	0.44	0.297	1,765

Total number of blows analyzed: 49

BL# Sensors

1-51 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00); A4: [K10400] 342.0 (1.00)

BL# Comments

22 LE = 42.80 ft; WC = 16,784.3 f/s

Time Summary

Drive 3 minutes 5 seconds 11:04 AM - 11:07 AM BN 1 - 51

20.276 SPT - 37-39 RIG 2 | SPT-RIG 2
OP: DEV | Date: 08-October-2020

AR: 1.19 in² | SP: 0.492 k/ft³
LE: 40.80 ft | EM: 30,000 ksi
WS: 16,807.9 f/s | JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
9	36.00	0	0.303	86.6	27.5	12.5	57.5	0.75	0.75	0.304	2,433
10	36.00	0	0.318	90.9	26.9	13.2	57.6	1.07	1.07	0.301	2,078
11	36.00	0	0.315	89.9	27.5	12.8	57.5	0.88	0.87	0.306	2,545
12	36.00	0	0.312	89.0	27.5	12.8	57.6	0.86	0.86	0.306	2,399
13	36.00	0	0.307	87.7	27.3	13.1	57.6	0.82	0.80	0.306	1,988
14	36.00	0	0.304	86.8	26.5	12.9	57.4	0.80	0.78	0.300	2,143
15	36.00	0	0.308	88.0	27.4	12.7	57.5	0.77	0.75	0.303	2,310
16	36.00	0	0.305	87.2	27.3	12.5	57.2	0.85	0.85	0.305	2,398
17	36.00	0	0.304	87.0	26.7	13.0	57.6	0.87	0.86	0.301	2,233
18	36.00	0	0.311	88.8	27.2	13.2	57.3	0.94	0.93	0.302	2,314
19	36.00	0	0.307	87.7	27.5	12.8	57.3	0.73	0.70	0.300	2,512
20	36.00	0	0.302	86.4	27.5	12.3	57.3	0.74	0.73	0.301	2,378
23	36.00	0	0.303	86.7	26.8	12.5	57.4	0.63	0.63	0.304	2,368
24	36.00	0	0.302	86.4	26.2	12.9	57.2	0.68	0.67	0.303	1,982
25	36.00	0	0.303	86.6	26.3	12.4	57.2	0.96	0.95	0.300	2,096
26	36.00	0	0.292	83.4	25.9	12.5	57.0	0.57	0.57	0.299	2,129
27	36.00	0	0.308	88.1	26.2	13.2	57.2	0.83	0.83	0.304	2,074
28	36.00	0	0.302	86.4	26.0	12.6	57.1	0.99	0.99	0.299	2,081
29	36.00	0	0.298	85.0	26.3	12.3	57.5	0.70	0.68	0.299	2,147
30	36.00	0	0.300	85.8	26.8	12.6	57.4	0.67	0.67	0.301	1,928
		Average	0.305	87.2	26.9	12.7	57.4	0.81	0.80	0.302	2,227
		Std. Dev.	0.006	1.6	0.6	0.3	0.2	0.12	0.12	0.002	181
		Maximum	0.318	90.9	27.5	13.2	57.6	1.07	1.07	0.306	2,545
		Minimum	0.292	83.4	25.9	12.3	57.0	0.57	0.57	0.299	1,928

Total number of blows analyzed: 20

BL# Sensors

1-51 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

BL# Comments

22 LE = 42.80 ft; WC = 16,784.3 f/s

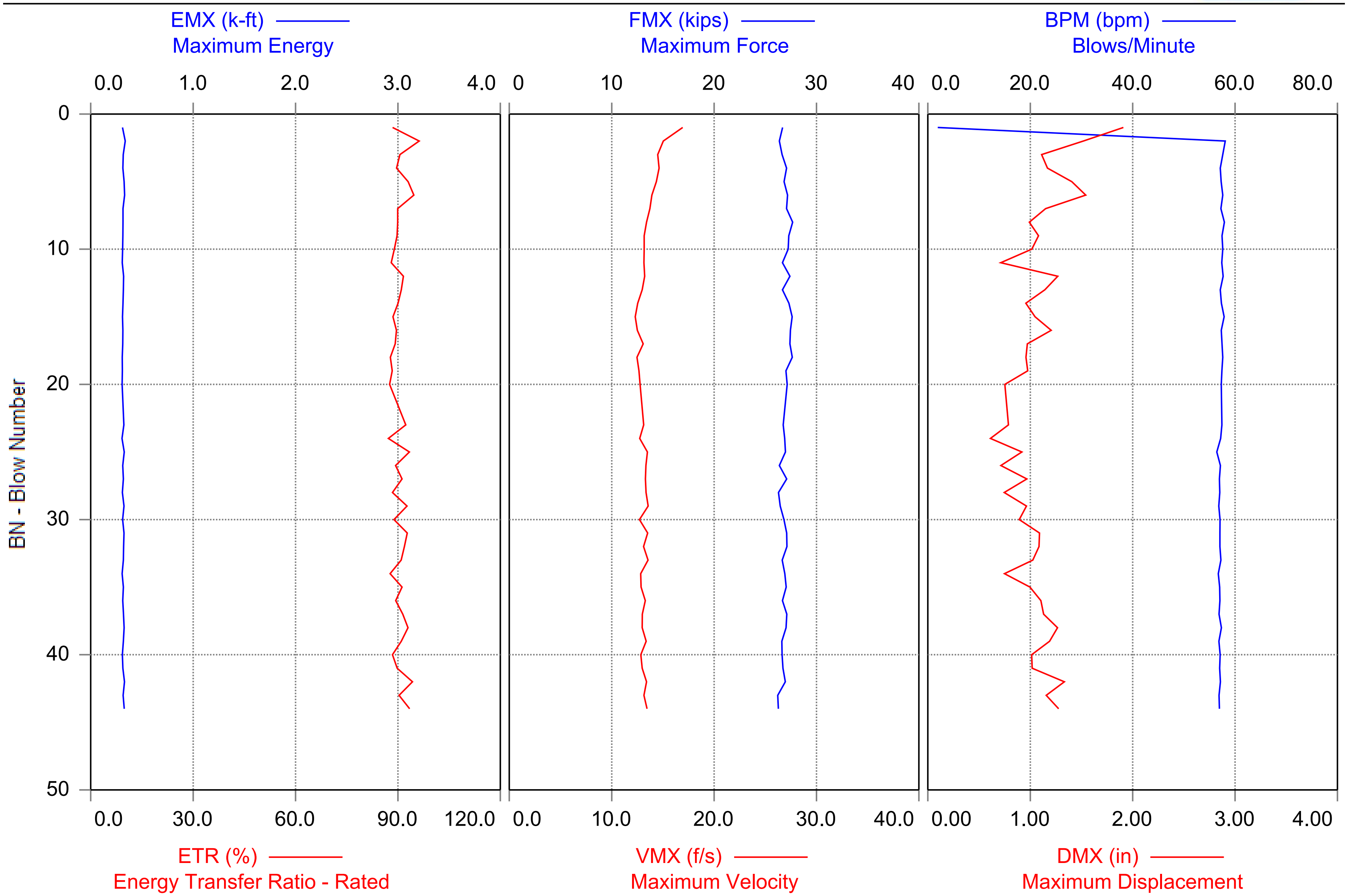
Time Summary

Drive 3 minutes 5 seconds 11:04 AM - 11:07 AM BN 1 - 51

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020 Test started: 08-October-2020

20.276 SPT - 39-41 RIG 2



20.276 SPT - 39-41 RIG 2
OP: DEV

SPT-RIG 2
Date: 08-October-2020

AR: 1.19 in²
LE: 45.80 ft
WS: 16,807.9 f/s

SP: 0.492 k/ft³
EM: 30,000 ksi
JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute

DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
1	36.00	0	0.310	88.4	26.7	16.9	1.9	1.91	1.91	0.303	1,940
2	36.00	0	0.337	96.2	26.4	15.0	58.1	1.52	1.51	0.302	2,670
3	36.00	0	0.317	90.6	26.6	14.5	57.6	1.11	1.11	0.303	2,588
4	36.00	0	0.314	89.6	27.1	14.6	57.1	1.17	1.17	0.305	2,520
5	36.00	0	0.325	93.0	26.8	14.4	57.3	1.41	1.40	0.303	2,027
6	36.00	0	0.331	94.7	27.2	13.9	57.6	1.54	1.54	0.306	2,195
7	36.00	0	0.315	89.9	27.1	13.7	57.2	1.15	1.14	0.306	2,481
8	36.00	0	0.315	89.9	27.7	13.4	57.9	0.99	0.99	0.307	2,364
9	36.00	0	0.314	89.7	27.3	13.2	57.4	1.08	1.07	0.303	2,231
10	36.00	0	0.311	88.9	27.2	13.2	57.6	1.01	1.01	0.304	2,558
11	36.00	0	0.308	88.0	26.7	13.1	57.4	0.71	0.69	0.304	2,035
12	36.00	0	0.321	91.6	27.4	13.2	57.7	1.27	1.27	0.307	2,348
13	36.00	0	0.318	91.0	26.7	13.0	57.1	1.14	1.14	0.305	2,196
14	36.00	0	0.315	90.0	27.3	12.5	57.3	0.96	0.93	0.301	2,185
15	36.00	0	0.310	88.5	27.6	12.3	57.9	1.05	1.04	0.303	2,261
16	36.00	0	0.313	89.5	27.4	12.5	57.3	1.20	1.20	0.301	2,309
17	36.00	0	0.312	89.2	27.4	13.1	57.4	0.97	0.96	0.302	2,181
18	36.00	0	0.307	87.8	27.6	12.5	57.6	0.96	0.95	0.302	2,165
19	36.00	0	0.309	88.3	27.0	12.7	57.4	0.97	0.97	0.301	2,207
20	36.00	0	0.306	87.5	27.1	12.8	57.3	0.75	0.75	0.303	1,947
23	36.00	0	0.323	92.3	26.7	13.1	57.4	0.79	0.79	0.302	2,425
24	36.00	0	0.305	87.2	26.9	12.7	57.2	0.61	0.55	0.300	2,367
25	36.00	0	0.327	93.3	27.0	13.5	56.4	0.92	0.91	0.307	2,296
26	36.00	0	0.313	89.3	26.4	13.3	57.1	0.71	0.71	0.297	2,368
27	36.00	0	0.319	91.2	27.1	13.3	56.9	0.97	0.97	0.300	2,492
28	36.00	0	0.309	88.4	26.3	13.4	57.0	0.75	0.75	0.302	2,144
29	36.00	0	0.324	92.6	26.5	13.6	56.8	0.96	0.96	0.304	2,391
30	36.00	0	0.311	88.8	26.8	12.7	57.1	0.89	0.89	0.303	2,366
31	36.00	0	0.325	92.7	27.1	13.5	57.0	1.09	1.09	0.304	2,719
32	36.00	0	0.322	91.9	27.1	13.1	57.0	1.08	1.08	0.303	2,661
33	36.00	0	0.318	90.9	26.6	13.5	57.2	1.03	1.03	0.304	2,158
34	36.00	0	0.307	87.7	26.9	12.8	56.7	0.75	0.75	0.305	2,239
35	36.00	0	0.319	91.2	27.0	12.9	57.0	1.00	1.00	0.302	2,401
36	36.00	0	0.313	89.3	26.7	13.3	57.0	1.10	1.10	0.302	2,224
37	36.00	0	0.320	91.4	27.1	13.0	56.9	1.13	1.13	0.303	2,358
38	36.00	0	0.325	93.0	27.0	13.0	57.3	1.27	1.27	0.304	2,320
39	36.00	0	0.318	91.0	26.6	13.4	56.8	1.19	1.19	0.302	2,060
40	36.00	0	0.309	88.4	26.6	12.8	57.1	1.01	1.01	0.296	2,279
41	36.00	0	0.314	89.8	26.7	13.0	57.0	1.02	1.02	0.300	2,245
42	36.00	0	0.330	94.3	27.0	13.4	57.1	1.33	1.33	0.306	2,188
43	36.00	0	0.316	90.3	26.2	13.1	56.9	1.16	1.15	0.301	2,131
44	36.00	0	0.327	93.4	26.3	13.5	56.9	1.28	1.27	0.302	2,166
		Average	0.317	90.5	26.9	13.3	55.9	1.07	1.06	0.303	2,295
		Std. Dev.	0.007	2.1	0.4	0.8	8.4	0.24	0.25	0.002	184
		Maximum	0.337	96.2	27.7	16.9	58.1	1.91	1.91	0.307	2,719

20.276 SPT - 39-41 RIG 2
OP: DEV

SPT-RIG 2
Date: 08-October-2020

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
		Minimum	0.305	87.2	26.2	12.3	1.9	0.61	0.55	0.296	1,940

Total number of blows analyzed: 42

BL# Sensors

1-44 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

BL# Comments

22 LE = 47.80 ft; WC = 16,771.9 f/s

Time Summary

Drive 2 minutes 46 seconds 11:30 AM - 11:32 AM BN 1 - 44

20.276 SPT - 39-41 RIG 2 SPT-RIG 2
OP: DEV Date: 08-October-2020

AR: 1.19 in² SP: 0.492 k/ft³
LE: 45.80 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
11	36.00	0.308	88.0	26.7	13.1	57.4	0.71	0.69	0.304	2,035
12	36.00	0.321	91.6	27.4	13.2	57.7	1.27	1.27	0.307	2,348
13	36.00	0.318	91.0	26.7	13.0	57.1	1.14	1.14	0.305	2,196
14	36.00	0.315	90.0	27.3	12.5	57.3	0.96	0.93	0.301	2,185
15	36.00	0.310	88.5	27.6	12.3	57.9	1.05	1.04	0.303	2,261
16	36.00	0.313	89.5	27.4	12.5	57.3	1.20	1.20	0.301	2,309
17	36.00	0.312	89.2	27.4	13.1	57.4	0.97	0.96	0.302	2,181
18	36.00	0.307	87.8	27.6	12.5	57.6	0.96	0.95	0.302	2,165
19	36.00	0.309	88.3	27.0	12.7	57.4	0.97	0.97	0.301	2,207
20	36.00	0.306	87.5	27.1	12.8	57.3	0.75	0.75	0.303	1,947
23	36.00	0.323	92.3	26.7	13.1	57.4	0.79	0.79	0.302	2,425
24	36.00	0.305	87.2	26.9	12.7	57.2	0.61	0.55	0.300	2,367
25	36.00	0.327	93.3	27.0	13.5	56.4	0.92	0.91	0.307	2,296
26	36.00	0.313	89.3	26.4	13.3	57.1	0.71	0.71	0.297	2,368
27	36.00	0.319	91.2	27.1	13.3	56.9	0.97	0.97	0.300	2,492
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30	36.00	0.311	88.8	26.8	12.7	57.1	0.89	0.89	0.303	2,366
31	36.00	0.325	92.7	27.1	13.5	57.0	1.09	1.09	0.304	2,719
32	36.00	0.322	91.9	27.1	13.1	57.0	1.08	1.08	0.303	2,661
33	36.00	0.318	90.9	26.6	13.5	57.2	1.03	1.03	0.304	2,158
34	36.00	0.307	87.7	26.9	12.8	56.7	0.75	0.75	0.305	2,239
	Average	0.315	89.9	27.0	13.0	57.2	0.93	0.93	0.303	2,294
	Std. Dev.	0.007	1.9	0.4	0.4	0.3	0.17	0.18	0.002	177
	Maximum	0.327	93.3	27.6	13.6	57.9	1.27	1.27	0.307	2,719
	Minimum	0.305	87.2	26.3	12.3	56.4	0.61	0.55	0.297	1,947

Total number of blows analyzed: 22

BL# Sensors

1-44 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

BL# Comments

22 LE = 47.80 ft; WC = 16,771.9 f/s

Time Summary

Drive 2 minutes 46 seconds 11:30 AM - 11:32 AM BN 1 - 44

GEOSCIENCES TESTING AND RESEARCH, INC.

55 Middlesex Street, Suite 225, N. Chelmsford, MA 01863
Ph: (978)251-9395, Fx: (978)251-9396

October 21, 2020 GTR Project # 20.276

Mr. Fred Lavoie
Cascade Environmental
151 Suffolk Lane
Gardner, Ma 01440

RE: Standard Penetration Test Energy Measurement Calibration
Tera Sonic TSI 150CC (serial #PE6068L274073) w/ Automatic Hammer (serial #22630-5)
Concord, Ma

Dear Fred:

At your request, we have analyzed the standard penetration test energy measurement calibrations taken on October 8, 2020. The testing was conducted in order to evaluate the energy delivered to the sampling rods for various drill rig and hammer combinations. This information was used to determine the appropriate energy correction factor for the rig-hammer system. The particular rig tested in this report was the Tera Sonic TSI 150CC Rig (serial #PE6068L274073) with an Automatic Hammer (serial #22630-5). The dynamic testing was carried out in general accordance with ASTM D4633-10, “Standard Test Method for Energy Measurement for Dynamic Penetrometers”.

Field Information

One Tera Sonic TSI 150CC Rig (serial #PE6068L274073) with an Automatic Hammer (serial #22630-5) was evaluated. See Appendix B for pictures of the rig. The rig was fitted with an automatic hammer. A borehole was performed at onsite at 2229 Main Street in Concord, Ma. The drilling was accomplished using 4” ID HW Casing and AWJ rods. A standard split spoon sampler was used to collect the samples. Standard penetration tests (SPTs) were conducted at depths of 32, 34, 36, 38 and 40 feet in general accordance with ASTM D1586. The collected soil samples generally indicated silt with occasional sand pockets. Refer to Table 1 for details on the field information and conditions.

Instrumentation

For tests the instrumentation consisted of an 18 inch long AWJ rod sub section. The rod was equipped with two full bridge foil resistance strain gages. Two piezo resistive accelerometer transducers were also attached to each of the instrumented sub sections. A Pile Driving Analyzer™ (PDA) Model 8G, manufactured by Pile Dynamics, Inc. was used to collect the data. The PDA is a computer fitted with a data acquisition and signal conditioning system. During driving of the drill string, the strain and acceleration signals are recorded and processed for each hammer blow. The strain signal is converted to a force record and the acceleration signal is converted to a velocity record. The PDA saves selected hammer blows containing this information to disk and determines the compressive stresses, displacement, and energy at the point of measurement. This information can be viewed on the computer screen during driving. Refer to Appendix A for literature and background on dynamic testing in general.

Energy Measurement

The primary purpose of the testing was to determine the energy transferred from the hammer to the instrumented subsection. The PDA measurements of force and velocity were analyzed to calculate the energy using the FV method (EMX), which is based on both force and velocity measurements as follows:

$$EMX = \int F(t)\, v(t) dt$$

Another method, known as the EF2 method, was not used due to the limitations associated with the measurements (i.e. based on force alone assuming proportionality at the gage locations since velocity is not used in the analysis). The EF2 method is not the recommended method in ASTM D4633.

The rated energy (designated as ER) for the hammer is 0.35 kip-ft based on the 2.5 feet (30 inch) drop height and 0.14 kip (140 pound) ram. The actual efficiency or energy transfer ratio (ETR) for the hammer system can then be determined using EMX and ER as follows:

ETR = (EMX/ER)*100%

For SPT, the typical ETR is taken as 60%, based on history and experience from prior studies. To adjust the measured SPT N values (Nmeasured) for actual hammer performance, the ETR can be used to correct the Nmeasured to N_{60} by using the correction factor (Cn) determined as:

Cn = ETR/60%

and N_{60} = Cn * Nmeasured.

This is a correction for energy only. The application of additional corrections for overburden, non-conventional samplers, etc., was not considered in this study and should be evaluated for appropriateness by the geotechnical engineer for this project.

Results

The results of the testing program are summarized in Tables 1 for the automatic hammer. The tables include EMX, ER, ETR, FMX (maximum measured force in the rod subsection), and BPM (blows per minute). The blow count, including the SPT N- value, and the soil description were recorded by others. See Appendix C for the boring log. The data was presented with statistical information including the average, maximum, minimum and standard deviation for the N-value associated with group of data sets (sample depths) for the hammer. In addition, the data for all depths for a particular hammer combined are also presented in the tables. Note that the N-value may not match the number of blows analyzed due to differences between the inspector’s blow count observations and the PDA recorded number. In some cases, bad blows or unreliable data from the PDA may also have been omitted. These results for the blows are presented in Appendix D as plots with blow number and in tabular form. Additional information is also presented in Appendix D including maximum velocity, maximum acceleration, maximum displacement and final displacement.

For the Tera Sonic TSI 150CC Rig (serial #PE6068L274073) with an Automatic Hammer (serial #22630-5), the results indicate that the average ETR varied between 86% and 95% for the five conforming test depths. The average ETR for all data with N-Values between 10 and 50 (5 locations) was around 91%, resulting in an overall Cn = 1.52. The typical blow rate was around 54 bpm for the automatic hammer.

This report has been prepared in accordance with generally accepted geotechnical engineering principles with specific application to this project. Our conclusions are based on applicable standards of practice, including any information reported to and/or prepared for us. No other warranty, expressed or implied, is made.

We have appreciated this opportunity to work with you on this project. If you have any questions regarding this report, please contact us at (978) 251-9395.

Sincerely,
Geosciences Testing and Research, Inc.

Domenic E. Valeri
Geotechnical Engineer

Curtis A. George, P.E.
Principal

Attachments: Table, Appendices A - D
20.276 Cascade Drilling SPT Report.docx

TABLE

TABLE 1
SPT ROD[1] CALIBRATION
TERA SONIC TSI150CC WITH AN AUTOMATIC HAMMER
SUMMARY OF RESULTS

RIG TYPE	HAMMER TYPE	BORING	DATE	Test Number	OPERATOR	DEPTH	SAMPLE [2] DESCRIPTION	BLOW [2] COUNT	BLOWS [3] ANALYZED		EMX[4] (k-ft)	ER[5] (k-ft)	ETR[6] (%)	FMX (kips)	BPM (bpm)	Cn[7]
Tera Sonic TSI150CC	Auto Hammer	HA20-CMT-2	10/8/20	#1	R.M	32-34	Silt (ML)	3,9,12,12	21	Average	0.314	0.350	89.7	28.7	52.8	1.50
										Std.Dev.	0.006	0.000	1.7	0.8	0.3	
										Maximum	0.324	0.350	92.5	29.8	54.0	
										Minimum	0.300	0.350	85.8	27.0	52.1	
				#2	R.M	34-36	Silt (ML)	7,15,17	32	Average	0.323	0.350	92.3	29.1	53.6	1.54
										Std.Dev.	0.004	0.000	1.1	0.6	0.1	
										Maximum	0.332	0.350	94.8	30.2	53.8	
										Minimum	0.316	0.350	90.2	27.7	53.3	
				#3	R.M	36-38	Silt (ML)	4,6,12	18	Average	0.325	0.350	92.9	28.8	53.9	1.55
										Std.Dev.	0.004	0.000	1.1	0.5	0.5	
										Maximum	0.332	0.350	94.9	29.7	54.2	
										Minimum	0.317	0.350	90.6	28.0	51.9	
				#4	R.M	38-40	Silt (ML)	6,9,10,11	19	Average	0.319	0.350	91.1	26.3	54.0	1.52
										Std.Dev.	0.004	0.000	1.2	0.6	0.1	
										Maximum	0.327	0.350	93.4	27.3	54.2	
										Minimum	0.312	0.350	89.1	25.1	53.9	
				#5	R.M	40-42	Silt (MH) occasional sand pockets	6,9,11,15	20	Average	0.316	0.350	90.3	26.6	54.1	1.51
										Std.Dev.	0.003	0.000	1.0	0.5	0.1	
										Maximum	0.325	0.350	92.9	27.5	54.3	
										Minimum	0.311	0.350	88.9	25.7	53.8	
				Average[8]		-	-	-	110	Average	0.320	0.350	91.3	28.0	53.7	1.52
										Maximum	0.332	0.350	94.9	30.2	54.3	
										Minimum	0.300	0.350	85.8	25.1	51.9	

Notes:
1. NWJ rods used with NWJ instrumented rod.
2. The soil description and SPT N-value were recorded by others. The SPT N-value is the sum of the middle 2 numbers when the sampler s driven for 4 - six inch intervals
3. Blows analyzed correspond to SPT N-value and may not match up exactly with the N-value due to differences in blow count logging between PDA and inspector or poor data quality.
4. EMX is the integration of F and V obtained from the PDA.
5. ER is the rated energy of 0.35 kip-ft based on 140 pound hammer and 2.5 feet drop height.
6. ETR is the energy transfer ratio based on (EMX/ER)*100%.
7. Cn is the energy correction factor which is equal to ETR/60% and is used to convert the measured SPT N-value to the corrected equivalent value representing 60% energy transfer.

APPENDIX A
DYNAMIC ANALYSIS LITERATURE

HIGH STRAIN DYNAMIC PILE TESTING

Introduction

Dynamic pile testing (a.k.a. High Strain Dynamic Pile Testing - HSDPT) is commonly employed for evaluating the capacity of driven piles. It is also provides information about hammer performance and pile integrity/stresses. Dynamic testing is carried out in accordance with ASTM D4945, “Standard Test Method for High Strain Dynamic Testing of Piles”. Dynamic pile testing involves using strain gages and accelerometers to record an impact wave and its reflections generated by a piling hammer. Both driven piles and drilled foundations can be tested (provided that an impact hammer is used to create the high strain wave for the drilled foundations).

Procedure

Dynamic pile testing was performed using a Pile Driving Analyzer (PDA®), such as the PAK®, PAL®, or PAX® systems, manufactured by Pile Dynamics, Inc. (PDI) of Cleveland, Ohio. These systems are computers fitted with data acquisition and signal conditioning components. The instrumentation consists of two strain gages and two accelerometer transducers attached a minimum of 1.5 pile diameters below the pile top. During impact, the strain and acceleration signals are recorded and processed for each hammer blow. The strain signal is converted to a force record and the acceleration signal is converted to a velocity record. The PDA® saves selected hammer blows containing this information to disk and determines the transferred energy, compressive/tensile stresses, displacement, pile integrity, and the estimated pile bearing capacity using the Case Method. This information can be viewed on the computer screen during driving. A screen shot of data collection in the PDA® Windows (PDA-W®) Program is provided in Figure 1. Selected blows can be further processed to predict the static pile capacity using signal matching programs.

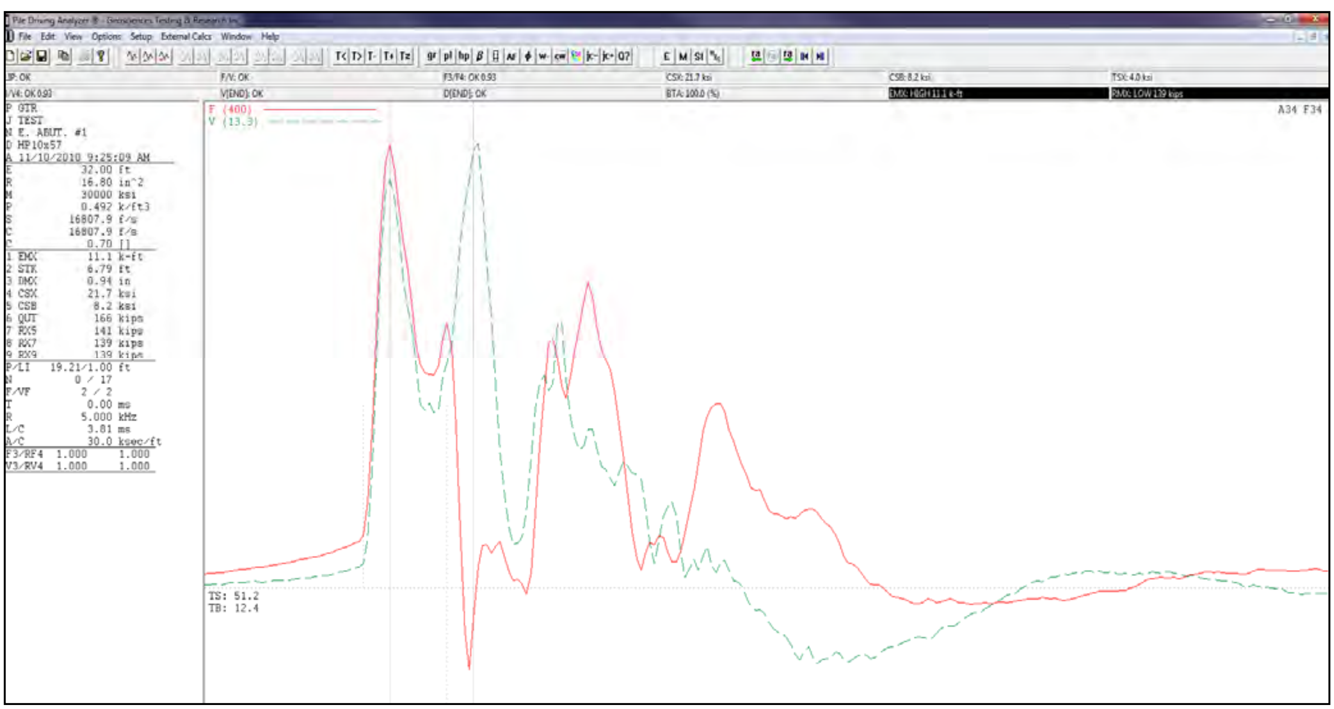

Figure 1. Data collection during pile driving in the (PDI - PDA®-Win Program).

Theory

When a ram strikes the pile head, it initiates a large strain wave that propagates down the pile as illustrated in Figure 2. External soil resistance or changes in the pile's impedance (due to variations in the pile's material or geometry) causes reflection waves that are recorded by the instrumentation. Knowing the material properties and pile geometry at the point of measurement, the strain can be converted to force, while the acceleration is integrated with time to produce velocity.

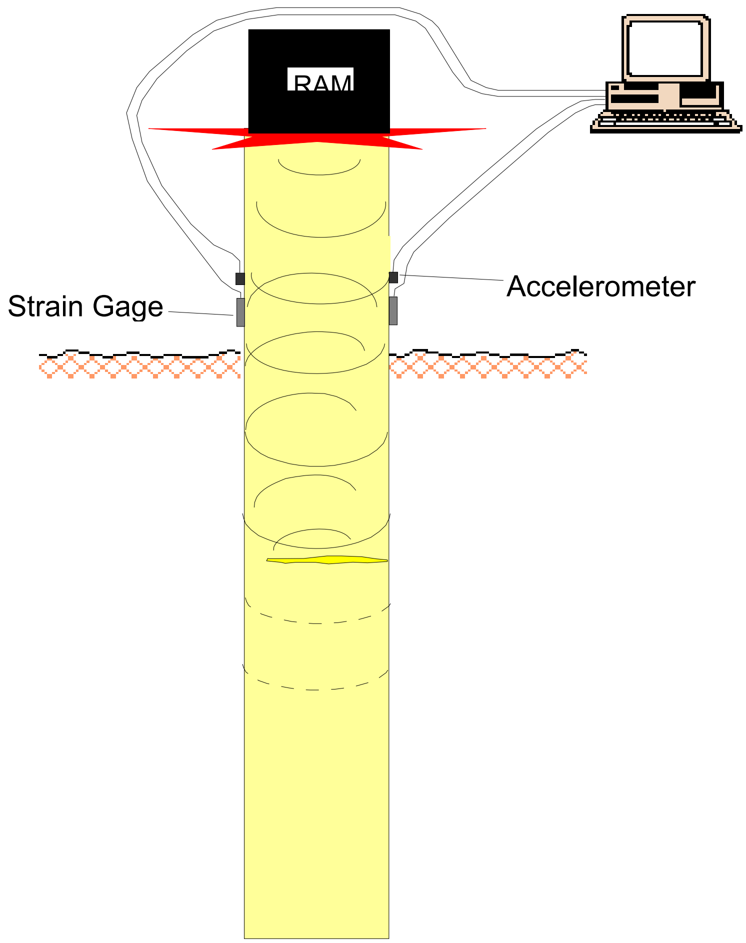

Figure 2. Pile instrumentation and hammer impact.

As long as there is no change in the pile impedance and there are no external forces (i.e. friction), the force and velocity are proportional (equal). Reflections at the tip can be explained by two classical boundary conditions. Free end conditions (analogous to easy driving through soft clay) require zero force and no velocity restrictions at the tip, resulting in a compression wave returning as a tension wave and an increase in velocity (theoretically doubling). Figure 3 graphically presents a typical reflection from a pipe pile during penetration into soft clay. Fixed end conditions (analogous to hard driving into bedrock) require zero velocity and no force restrictions at the tip, resulting in a compression wave being reflected with a greater magnitude than the incident wave (theoretically doubling) and the tip velocity at theoretically zero. Figure 4 graphically presents a typical reflection from an H-pile driven to bedrock. The time the wave takes to travel down to the tip and reflect back to the transducers is twice the pile length divided by the wave speed of the pile material (2L/C).

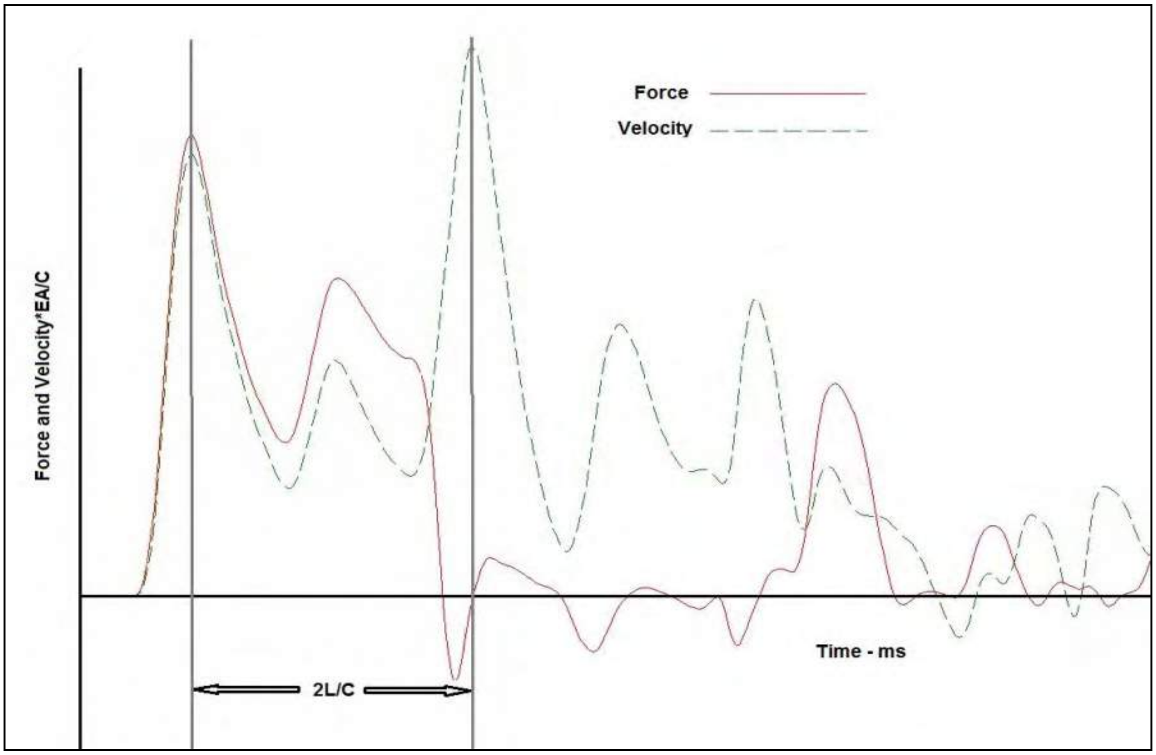

Figure 3. Typical Force and Velocity traces for a pipe pile driven into soft clay (high velocity and low force at tip - 2L/C).

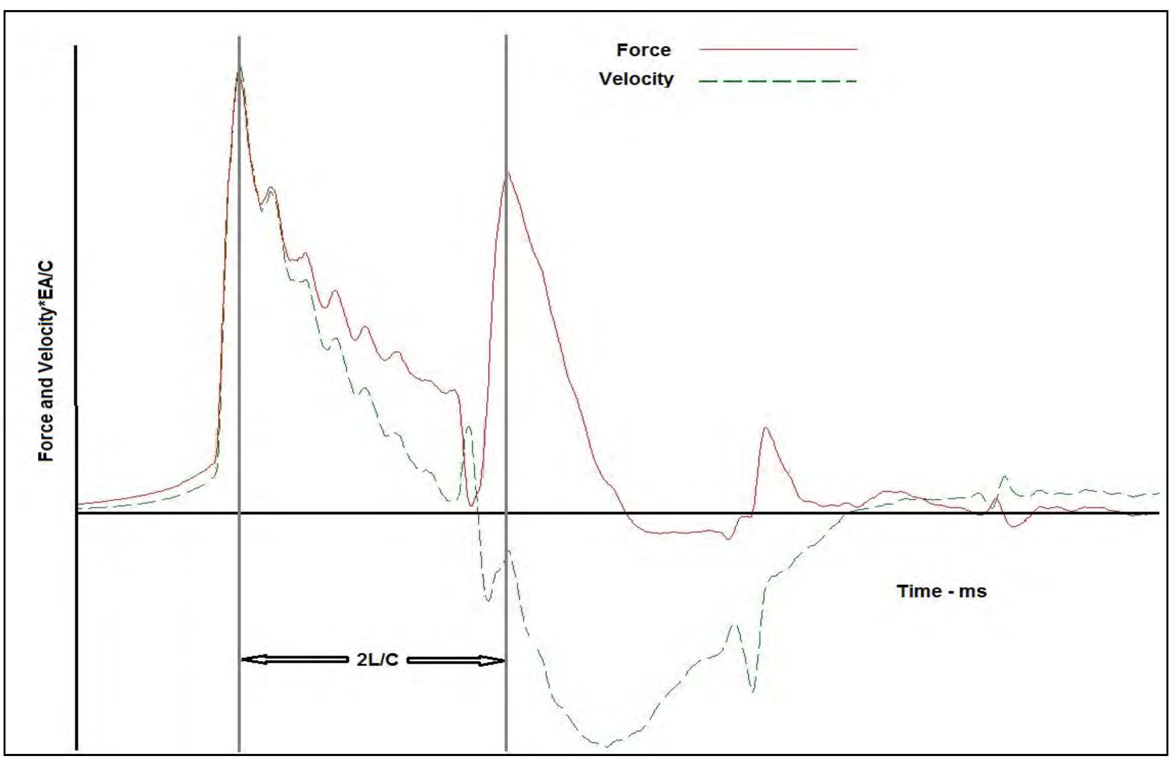

Figure 4. Typical Force and Velocity traces for an H-pile driven into bedrock (high force and low velocity at tip - 2L/C).

If a pile contains a defect or is damaged (e.g. reduction in impedance) during driving, the wave reflecting from the zone of decreased impedance will show a reduction in the force and increase in the velocity (somewhat comparable to "free end conditions"). These reflections would arrive to the measuring transducers before the expected reflections associated with the pile tip as the damaged zone is at a point along the pile between the transducer location and pile tip. The detection of damage during driving is usually easily identifiable and typically associated with cracking of concrete piles or splice breakage.

Dynamic Testing Summary Output

After data collection, the most pertinent output quantities from the dynamic pile testing can be summarized in a graphical manner. The data can be also presented in tabular format, averaging the results based on penetration depth or blow number as specified by the user. Figure 5 shows typical graphical output. Each of the three plots presents two quantities sharing the vertical (penetration) axis.

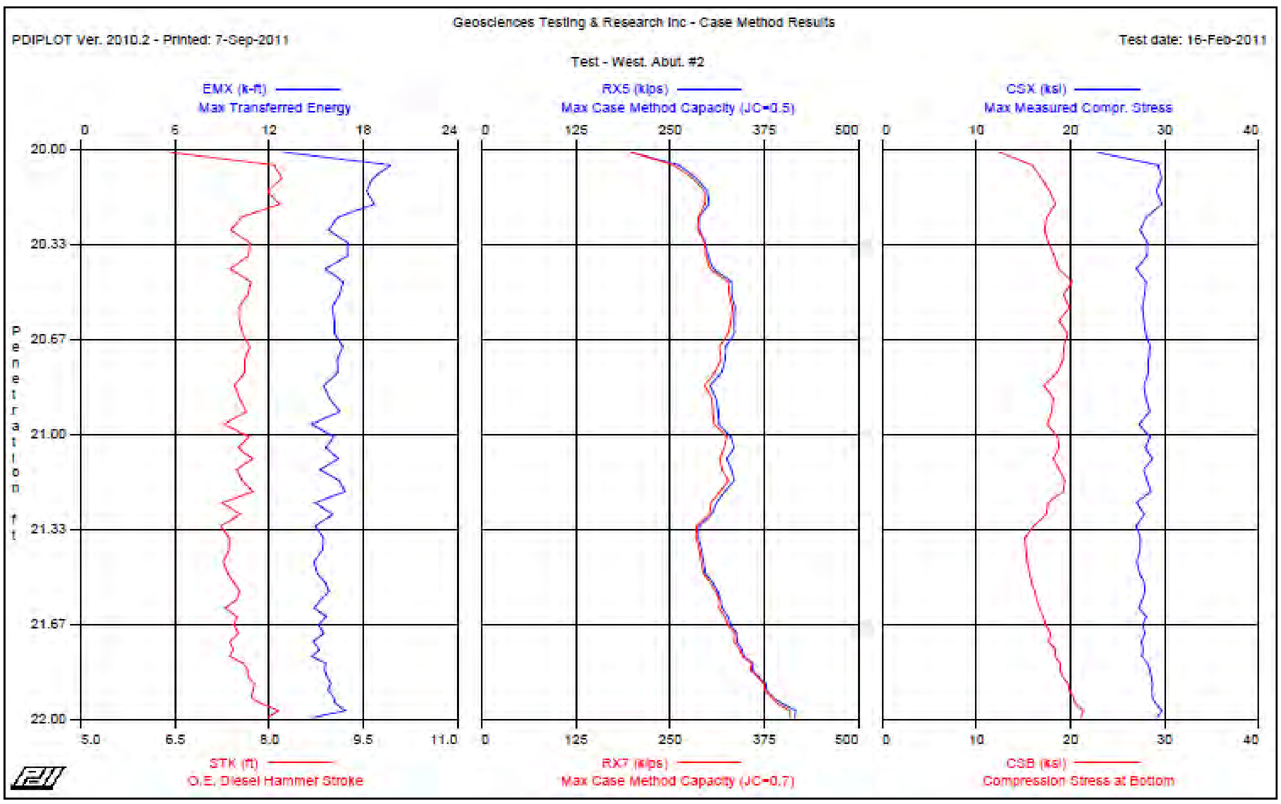

Figure 5. Typical Dynamic Testing summary Output (PDI Plot® Program)

Signal Matching Analyses

Signal matching using the dynamic testing data can be performed to predict the static pile capacity. Programs such as CAPWAP® (developed by Pile Dynamics, Inc.) or TEPWAP/PWAP (developed by GTR) are numerical analyses used to solve the one dimensional wave equation using the measured force and velocity. E.A Smith (1960) suggested modeling the hammer-pile-soil system for use in the wave equation by a series of masses, springs and dashpots as shown in Figure 6. The signal matching programs determine the best match between measured and calculated pile top forces and replace the hammer input with the measured force and velocity. The pile is separated into many small segments, often 1 meter in length. The velocity record obtained from the dynamic pile testing transducers is used as input to the top pile segment. The resistance, damping, and quake are the primary soil parameters assigned by the user to each pile segment below grade. The signal matching programs will calculate the displacement, velocity, and stresses (forces) for each pile segment based on the input velocity record and the user assigned soil parameters. These parameters are adjusted and modified in an iterative fashion until the best match is obtained between the force calculated for the pile top segment and the force measured at the pile top during testing. The user assigned soil parameters based on the best match represent the "actual soil conditions", including the resistance (and therefore pile capacity). This capacity is based on the resistance at the time of the testing. Static load tests are typically conducted several days or weeks after driving. Therefore, restrike tests are recommended to be performed some time after driving to assess time dependent changes in pile capacity, such as setup or relaxation.

New PDA Appendix.docx

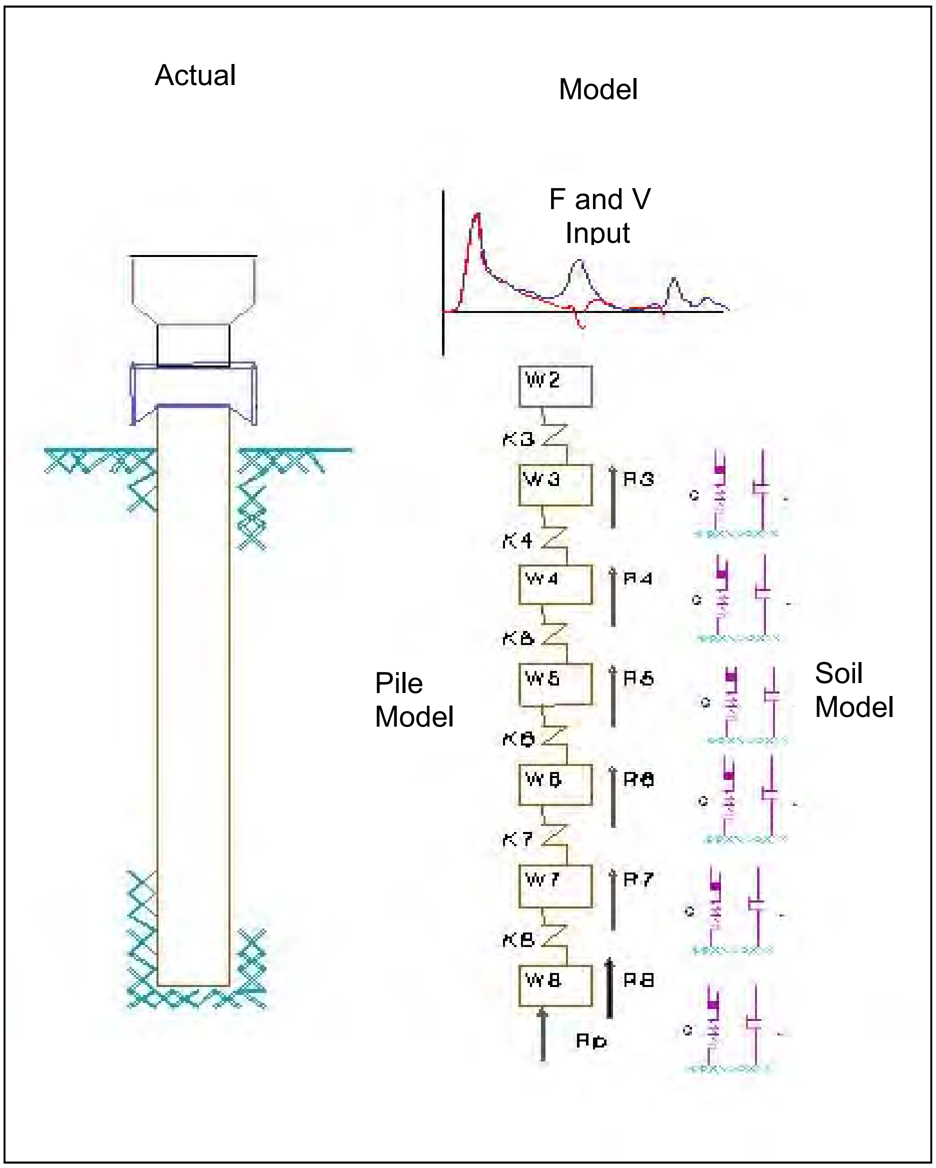

Figure 6. Signal Matching Model (i.e. CAPWAP® or TEPWAP/PWAP).

APPENDIX B
RIG

GEOSCIENCES TESTING AND RESEARCH, INC.

55 Middlesex Street, Suite 225, N. Chelmsford, MA 01863
Ph: (978)251-9395, Fx: (978)251-9396

Project: Cascade Drilling Rig Calibration
Project No: 20.276
Drawn By: DEV
Date: 10/8/2020

GEOSCIENCES TESTING AND RESEARCH, INC.

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Project No: 20.276
Drawn By: DEV
Date: 10/8/2020

APPENDIX C
BORING LOG

Maillet

Terrasonic TSI 150CC

HALEY ALDRICH — TEST BORING REPORT

BORING NO. HA20-CMT-2

Page 2 of

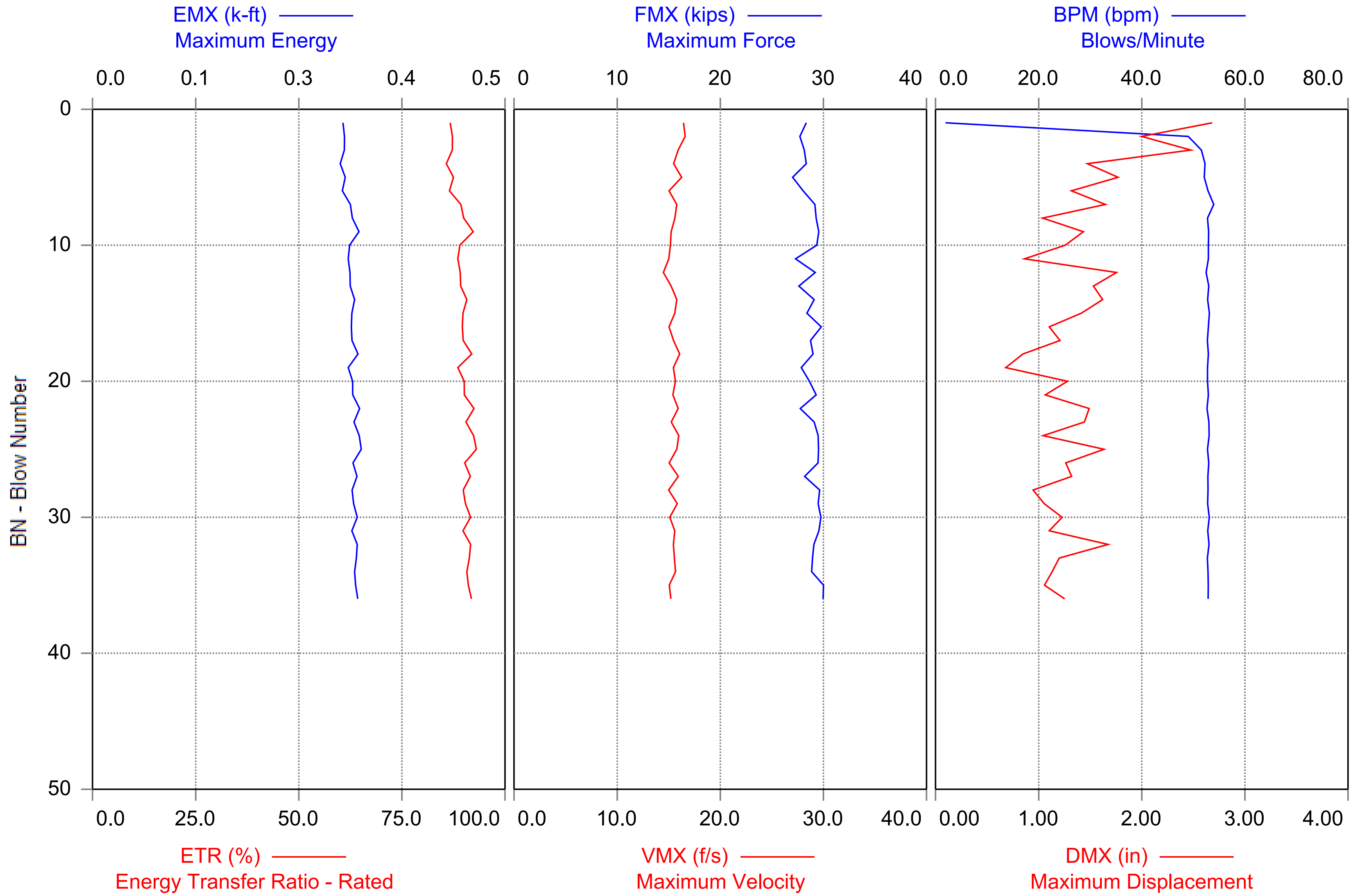
Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
30		~~S17~~															
	3 9 12 12	S17 15"	32 – 34			MH	very stiff Brown to Dark tan SILT (ML) No structure, No odor, moist, mps. <1mm					10	90				
35	7 15 17 25	S18 16"	34 – 36			MH	Very stiff Brown to Dark tan SILT (ML) mps <1mm No structure, no odor, moist					10	90				
	4 6 12 7	S19 7"	36 – 38			MH	Similar to above, moist					10	90				
	6 9 10 11	S20 R=13"	38 – 40			MH	S20: Very stiff, light brown SILT (ML) no structure, no odor, moist, mps <1mm					10	90				
						SP	S20A: 4" medium dense, tan poorly graded SAND (SP) mps 0.5, no structure, no odor, dry				30	60	10				
40	6 9 11 15	S21 13"	40 – 42			MH	Very stiff, Light Brown SILT (MH) mps <1mm no structure, no odor, moist. Ocassional Sand pocket, poorly graded.					10	90				
		S22	42 – 44														
45		S23	44 – 46														

APPENDIX D
PDA DATA

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020 Test started: 08-October-2020

20.276 SPT - 32-34



20.276 SPT - 32-34 SPT-RIG 1
OP: DEV Date: 08-October-2020

AR: 1.19 in² SP: 0.492 k/ft³
LE: 34.80 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

EMX: Maximum Energy DMX: Maximum Displacement
ETR: Energy Transfer Ratio - Rated DFN: Final Displacement
FMX: Maximum Force EF2: Energy of F² (ASTM D4633)
VMX: Maximum Velocity AMX: Maximum Acceleration
BPM: Blows/Minute

BL#	Depth ft	BLC bl/ft	EMX k-ft	ETR (%)	FMX kips	VMX f/s	BPM bpm	DMX in	DFN in	EF2 k-ft	AMX g's
1	34.00	0	0.304	86.7	28.3	16.4	1.9	2.68	2.68	0.304	2,547
2	34.00	0	0.305	87.2	27.7	16.6	49.0	2.00	2.00	0.301	2,819
3	34.00	0	0.305	87.2	28.1	15.9	51.5	2.48	2.48	0.301	2,915
4	34.00	0	0.300	85.8	28.3	15.5	52.3	1.47	1.47	0.295	3,150
5	34.00	0	0.306	87.5	27.0	16.3	52.1	1.77	1.77	0.310	2,703
6	34.00	0	0.303	86.5	28.0	15.0	52.8	1.32	1.32	0.293	3,138
7	34.00	0	0.313	89.3	29.2	15.8	54.0	1.65	1.65	0.314	3,267
8	34.00	0	0.315	90.0	29.3	15.6	52.7	1.04	1.04	0.314	3,153
9	34.00	0	0.323	92.3	29.5	15.2	53.0	1.43	1.43	0.314	3,299
10	34.00	0	0.312	89.0	29.4	15.2	52.9	1.26	1.26	0.314	3,409
11	34.00	0	0.310	88.6	27.3	15.0	52.9	0.86	0.52	0.317	2,751
12	34.00	0	0.312	89.1	29.2	14.5	52.5	1.75	1.75	0.311	3,415
13	34.00	0	0.312	89.2	27.6	15.2	53.0	1.53	1.53	0.316	2,838
14	34.00	0	0.318	90.7	29.1	15.8	52.8	1.62	1.62	0.313	3,231
15	34.00	0	0.314	89.8	28.4	15.6	53.1	1.41	1.41	0.316	2,974
16	34.00	0	0.314	89.6	29.8	15.0	52.9	1.10	1.10	0.313	3,369
17	34.00	0	0.314	89.9	28.7	15.5	52.7	1.21	1.21	0.312	3,008
18	34.00	0	0.322	91.9	29.0	16.1	52.9	0.85	0.85	0.312	2,625
19	34.00	0	0.310	88.6	27.9	15.5	52.7	0.68	0.68	0.315	2,739
20	34.00	0	0.315	90.1	28.6	15.6	52.7	1.28	1.28	0.313	3,070
21	34.00	0	0.315	90.1	29.3	15.4	52.9	1.06	1.06	0.313	3,141
22	34.00	0	0.324	92.5	27.8	15.9	52.7	1.49	1.49	0.311	2,729
23	34.00	0	0.317	90.5	29.1	15.2	53.0	1.44	1.44	0.312	3,159
24	34.00	0	0.323	92.4	29.5	16.0	53.1	1.04	1.04	0.314	2,872
25	34.00	0	0.326	93.0	29.5	15.8	52.7	1.63	1.63	0.311	3,080
26	34.00	0	0.316	90.2	29.5	15.0	53.0	1.26	1.26	0.314	3,239
27	34.00	0	0.321	91.6	28.2	15.9	52.8	1.32	1.32	0.311	2,958
28	34.00	0	0.315	89.9	29.6	15.0	52.8	0.95	0.94	0.306	3,322
29	34.00	0	0.316	90.4	29.5	15.8	52.8	1.05	1.03	0.311	3,191
30	34.00	0	0.321	91.7	29.8	15.1	53.1	1.23	1.22	0.310	3,316
31	34.00	0	0.314	89.8	29.6	15.6	52.8	1.10	1.09	0.309	3,261
32	34.00	0	0.321	91.7	29.1	15.4	53.0	1.67	1.67	0.315	3,217
33	34.00	0	0.320	91.4	28.9	15.5	52.7	1.20	1.18	0.310	3,016
34	34.00	0	0.318	90.7	28.9	15.7	52.8	1.13	1.12	0.307	3,017
35	34.00	0	0.319	91.1	30.0	15.1	52.9	1.06	1.03	0.311	3,308
36	34.00	0	0.321	91.8	30.0	15.2	52.9	1.25	1.24	0.312	3,296
		Average	0.315	89.9	28.9	15.5	51.3	1.37	1.36	0.310	3,071
		Std. Dev.	0.006	1.8	0.8	0.4	8.4	0.41	0.43	0.005	233
		Maximum	0.326	93.0	30.0	16.6	54.0	2.68	2.68	0.317	3,415
		Minimum	0.300	85.8	27.0	14.5	1.9	0.68	0.52	0.293	2,547

Total number of blows analyzed: 36

20.276 SPT - 32-34
OP: DEV
SPT-RIG 1
Date: 08-October-2020

BL#	Sensors
1-36	F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00); A4: [K10400] 342.0 (1.00)

Time Summary

Drive 39 seconds 8:08 AM - 8:08 AM BN 1 - 36

20.276 SPT - 32-34 | SPT-RIG 1
OP: DEV | Date: 08-October-2020

AR: 1.19 in² | SP: 0.492 k/ft³
LE: 34.80 ft | EM: 30,000 ksi
WS: 16,807.9 f/s | JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
4	34.00	0	0.300	85.8	28.3	15.5	52.3	1.47	1.47	0.295	3,150
5	34.00	0	0.306	87.5	27.0	16.3	52.1	1.77	1.77	0.310	2,703
6	34.00	0	0.303	86.5	28.0	15.0	52.8	1.32	1.32	0.293	3,138
7	34.00	0	0.313	89.3	29.2	15.8	54.0	1.65	1.65	0.314	3,267
8	34.00	0	0.315	90.0	29.3	15.6	52.7	1.04	1.04	0.314	3,153
9	34.00	0	0.323	92.3	29.5	15.2	53.0	1.43	1.43	0.314	3,299
10	34.00	0	0.312	89.0	29.4	15.2	52.9	1.26	1.26	0.314	3,409
11	34.00	0	0.310	88.6	27.3	15.0	52.9	0.86	0.52	0.317	2,751
12	34.00	0	0.312	89.1	29.2	14.5	52.5	1.75	1.75	0.311	3,415
13	34.00	0	0.312	89.2	27.6	15.2	53.0	1.53	1.53	0.316	2,838
14	34.00	0	0.318	90.7	29.1	15.8	52.8	1.62	1.62	0.313	3,231
15	34.00	0	0.314	89.8	28.4	15.6	53.1	1.41	1.41	0.316	2,974
16	34.00	0	0.314	89.6	29.8	15.0	52.9	1.10	1.10	0.313	3,369
17	34.00	0	0.314	89.9	28.7	15.5	52.7	1.21	1.21	0.312	3,008
18	34.00	0	0.322	91.9	29.0	16.1	52.9	0.85	0.85	0.312	2,625
19	34.00	0	0.310	88.6	27.9	15.5	52.7	0.68	0.68	0.315	2,739
20	34.00	0	0.315	90.1	28.6	15.6	52.7	1.28	1.28	0.313	3,070
21	34.00	0	0.315	90.1	29.3	15.4	52.9	1.06	1.06	0.313	3,141
22	34.00	0	0.324	92.5	27.8	15.9	52.7	1.49	1.49	0.311	2,729
23	34.00	0	0.317	90.5	29.1	15.2	53.0	1.44	1.44	0.312	3,159
24	34.00	0	0.323	92.4	29.5	16.0	53.1	1.04	1.04	0.314	2,872
		Average	0.314	89.7	28.7	15.5	52.8	1.30	1.28	0.312	3,050
		Std. Dev.	0.006	1.7	0.8	0.4	0.3	0.30	0.33	0.006	242
		Maximum	0.324	92.5	29.8	16.3	54.0	1.77	1.77	0.317	3,415
		Minimum	0.300	85.8	27.0	14.5	52.1	0.68	0.52	0.293	2,625

Total number of blows analyzed: 21

BL# Sensors

1-36 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

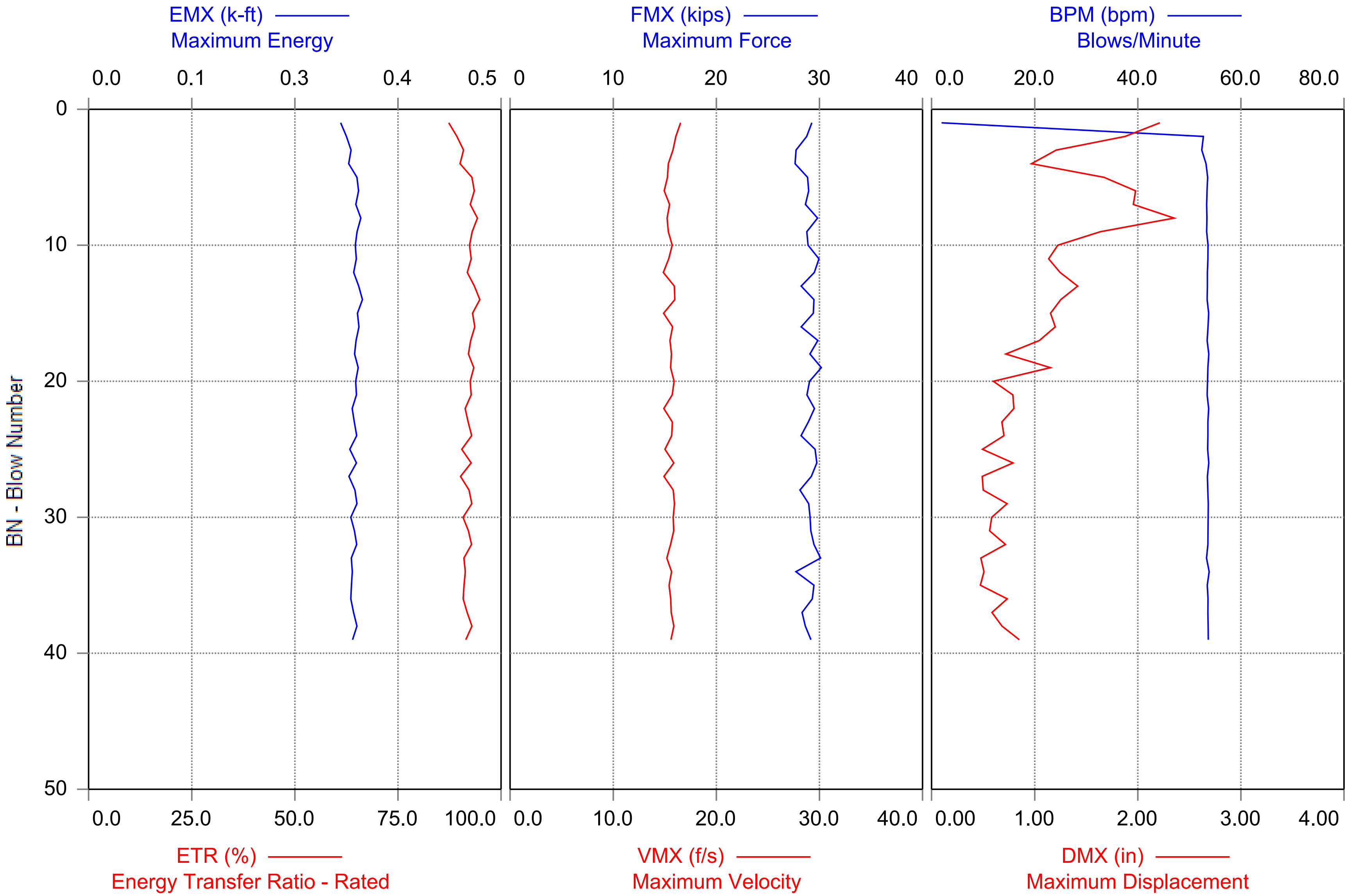
Time Summary

Drive 39 seconds 8:08 AM - 8:08 AM BN 1 - 36

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020 Test started: 08-October-2020

20.276 SPT - 34-36



20.276 SPT - 34-36 | SPT-RIG 1
OP: DEV | Date: 08-October-2020

AR: 1.19 in² | SP: 0.492 k/ft³
LE: 37.80 ft | EM: 30,000 ksi
WS: 16,807.9 f/s | JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
1	34.00	0	0.306	87.3	29.3	16.5	1.9	2.21	2.21	0.299	3,006
2	34.00	0	0.313	89.3	28.8	16.1	52.7	1.88	1.88	0.311	3,387
3	34.00	0	0.318	90.9	27.7	15.8	52.4	1.21	1.21	0.312	2,939
4	34.00	0	0.315	90.0	27.6	15.3	53.2	0.97	0.96	0.310	2,741
5	34.00	0	0.325	92.9	28.8	15.3	53.5	1.67	1.67	0.313	3,150
6	34.00	0	0.327	93.5	29.0	14.9	53.4	1.98	1.98	0.312	3,227
7	34.00	0	0.324	92.5	28.6	15.5	53.4	1.96	1.96	0.319	3,221
8	34.00	0	0.330	94.3	29.8	15.2	53.4	2.35	2.35	0.316	3,464
9	34.00	0	0.325	93.0	28.8	15.3	53.4	1.64	1.61	0.318	3,024
10	34.00	0	0.323	92.4	28.9	15.7	53.6	1.22	1.21	0.316	3,182
11	34.00	0	0.325	92.7	30.0	15.4	53.6	1.14	1.13	0.317	3,585
12	34.00	0	0.321	91.8	29.5	14.9	53.5	1.25	1.24	0.314	3,562
13	34.00	0	0.327	93.5	28.2	15.9	53.5	1.42	1.41	0.317	2,918
14	34.00	0	0.332	94.8	29.5	16.0	53.5	1.25	1.22	0.314	3,392
15	34.00	0	0.326	93.1	29.4	14.9	53.7	1.15	1.14	0.313	3,410
16	34.00	0	0.328	93.6	28.2	15.8	53.6	1.20	1.19	0.316	2,820
17	34.00	0	0.324	92.6	29.8	15.5	53.5	1.05	1.01	0.312	3,675
18	34.00	0	0.322	92.1	29.1	15.6	53.8	0.72	0.71	0.316	3,040
19	34.00	0	0.327	93.4	30.2	15.6	53.6	1.15	1.13	0.316	3,598
20	34.00	0	0.324	92.5	29.0	15.9	53.5	0.60	0.56	0.315	3,154
21	34.00	0	0.325	92.7	28.8	15.7	53.5	0.79	0.73	0.314	2,868
22	34.00	0	0.319	91.3	29.5	14.9	53.7	0.80	0.75	0.310	3,379
23	34.00	0	0.322	92.0	28.9	15.7	53.6	0.68	0.64	0.311	3,174
24	34.00	0	0.325	92.9	28.2	15.7	53.6	0.70	0.65	0.311	2,753
25	34.00	0	0.317	90.5	29.6	15.0	53.5	0.49	0.33	0.311	3,502
26	34.00	0	0.325	92.7	29.7	15.9	53.8	0.79	0.74	0.314	3,481
27	34.00	0	0.316	90.2	29.2	14.9	53.5	0.49	0.36	0.310	3,188
28	34.00	0	0.323	92.2	28.1	15.8	53.6	0.50	0.36	0.313	2,881
29	34.00	0	0.325	92.9	29.0	15.9	53.7	0.73	0.65	0.312	2,997
30	34.00	0	0.318	90.8	29.1	15.8	53.6	0.58	0.51	0.311	3,134
31	34.00	0	0.322	92.1	29.2	15.9	53.6	0.56	0.47	0.313	3,251
32	34.00	0	0.325	92.8	29.5	15.6	53.6	0.72	0.65	0.310	3,241
33	34.00	0	0.318	91.0	30.1	15.2	53.3	0.48	0.21	0.314	3,586
34	34.00	0	0.320	91.3	27.7	15.7	53.8	0.51	0.40	0.308	2,575
35	34.00	0	0.319	91.0	29.5	15.4	53.5	0.47	0.23	0.315	3,009
36	34.00	0	0.318	90.8	29.3	15.6	53.6	0.73	0.64	0.310	3,003
37	34.00	0	0.321	91.8	28.3	15.6	53.6	0.59	0.42	0.314	2,733
38	34.00	0	0.325	92.9	28.6	15.9	53.6	0.68	0.55	0.313	2,866
39	34.00	0	0.320	91.4	29.2	15.6	53.7	0.85	0.78	0.311	2,908
		Average	0.322	92.0	29.0	15.6	52.2	1.03	0.97	0.313	3,154
		Std. Dev.	0.005	1.4	0.6	0.4	8.2	0.51	0.56	0.003	280
		Maximum	0.332	94.8	30.2	16.5	53.8	2.35	2.35	0.319	3,675
		Minimum	0.306	87.3	27.6	14.9	1.9	0.47	0.21	0.299	2,575

Total number of blows analyzed: 39

BL# Sensors

1-39 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

Time Summary

Drive 42 seconds 8:35 AM - 8:36 AM BN 1 - 39

20.276 SPT - 34-36
SPT-RIG 1
OP: DEV
Date: 08-October-2020

AR: 1.19 in²
LE: 37.80 ft
WS: 16,807.9 f/s
SP: 0.492 k/ft³
EM: 30,000 ksi
JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth ft	BLC bl/ft	EMX k-ft	ETR (%)	FMX kips	VMX f/s	BPM bpm	DMX in	DFN in	EF2 k-ft	AMX g's
8	34.00	0	0.330	94.3	29.8	15.2	53.4	2.35	2.35	0.316	3,464
9	34.00	0	0.325	93.0	28.8	15.3	53.4	1.64	1.61	0.318	3,024
10	34.00	0	0.323	92.4	28.9	15.7	53.6	1.22	1.21	0.316	3,182
11	34.00	0	0.325	92.7	30.0	15.4	53.6	1.14	1.13	0.317	3,585
12	34.00	0	0.321	91.8	29.5	14.9	53.5	1.25	1.24	0.314	3,562
13	34.00	0	0.327	93.5	28.2	15.9	53.5	1.42	1.41	0.317	2,918
14	34.00	0	0.332	94.8	29.5	16.0	53.5	1.25	1.22	0.314	3,392
15	34.00	0	0.326	93.1	29.4	14.9	53.7	1.15	1.14	0.313	3,410
16	34.00	0	0.328	93.6	28.2	15.8	53.6	1.20	1.19	0.316	2,820
17	34.00	0	0.324	92.6	29.8	15.5	53.5	1.05	1.01	0.312	3,675
18	34.00	0	0.322	92.1	29.1	15.6	53.8	0.72	0.71	0.316	3,040
19	34.00	0	0.327	93.4	30.2	15.6	53.6	1.15	1.13	0.316	3,598
20	34.00	0	0.324	92.5	29.0	15.9	53.5	0.60	0.56	0.315	3,154
21	34.00	0	0.325	92.7	28.8	15.7	53.5	0.79	0.73	0.314	2,868
22	34.00	0	0.319	91.3	29.5	14.9	53.7	0.80	0.75	0.310	3,379
23	34.00	0	0.322	92.0	28.9	15.7	53.6	0.68	0.64	0.311	3,174
24	34.00	0	0.325	92.9	28.2	15.7	53.6	0.70	0.65	0.311	2,753
25	34.00	0	0.317	90.5	29.6	15.0	53.5	0.49	0.33	0.311	3,502
26	34.00	0	0.325	92.7	29.7	15.9	53.8	0.79	0.74	0.314	3,481
27	34.00	0	0.316	90.2	29.2	14.9	53.5	0.49	0.36	0.310	3,188
28	34.00	0	0.323	92.2	28.1	15.8	53.6	0.50	0.36	0.313	2,881
29	34.00	0	0.325	92.9	29.0	15.9	53.7	0.73	0.65	0.312	2,997
30	34.00	0	0.318	90.8	29.1	15.8	53.6	0.58	0.51	0.311	3,134
31	34.00	0	0.322	92.1	29.2	15.9	53.6	0.56	0.47	0.313	3,251
32	34.00	0	0.325	92.8	29.5	15.6	53.6	0.72	0.65	0.310	3,241
33	34.00	0	0.318	91.0	30.1	15.2	53.3	0.48	0.21	0.314	3,586
34	34.00	0	0.320	91.3	27.7	15.7	53.8	0.51	0.40	0.308	2,575
35	34.00	0	0.319	91.0	29.5	15.4	53.5	0.47	0.23	0.315	3,009
36	34.00	0	0.318	90.8	29.3	15.6	53.6	0.73	0.64	0.310	3,003
37	34.00	0	0.321	91.8	28.3	15.6	53.6	0.59	0.42	0.314	2,733
38	34.00	0	0.325	92.9	28.6	15.9	53.6	0.68	0.55	0.313	2,866
39	34.00	0	0.320	91.4	29.2	15.6	53.7	0.85	0.78	0.311	2,908
		Average	0.323	92.3	29.1	15.5	53.6	0.88	0.81	0.313	3,167
		Std. Dev.	0.004	1.1	0.6	0.3	0.1	0.41	0.45	0.002	294
		Maximum	0.332	94.8	30.2	16.0	53.8	2.35	2.35	0.318	3,675
		Minimum	0.316	90.2	27.7	14.9	53.3	0.47	0.21	0.308	2,575

Total number of blows analyzed: 32

BL# Sensors

1-39 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00); A4: [K10400] 342.0 (1.00)

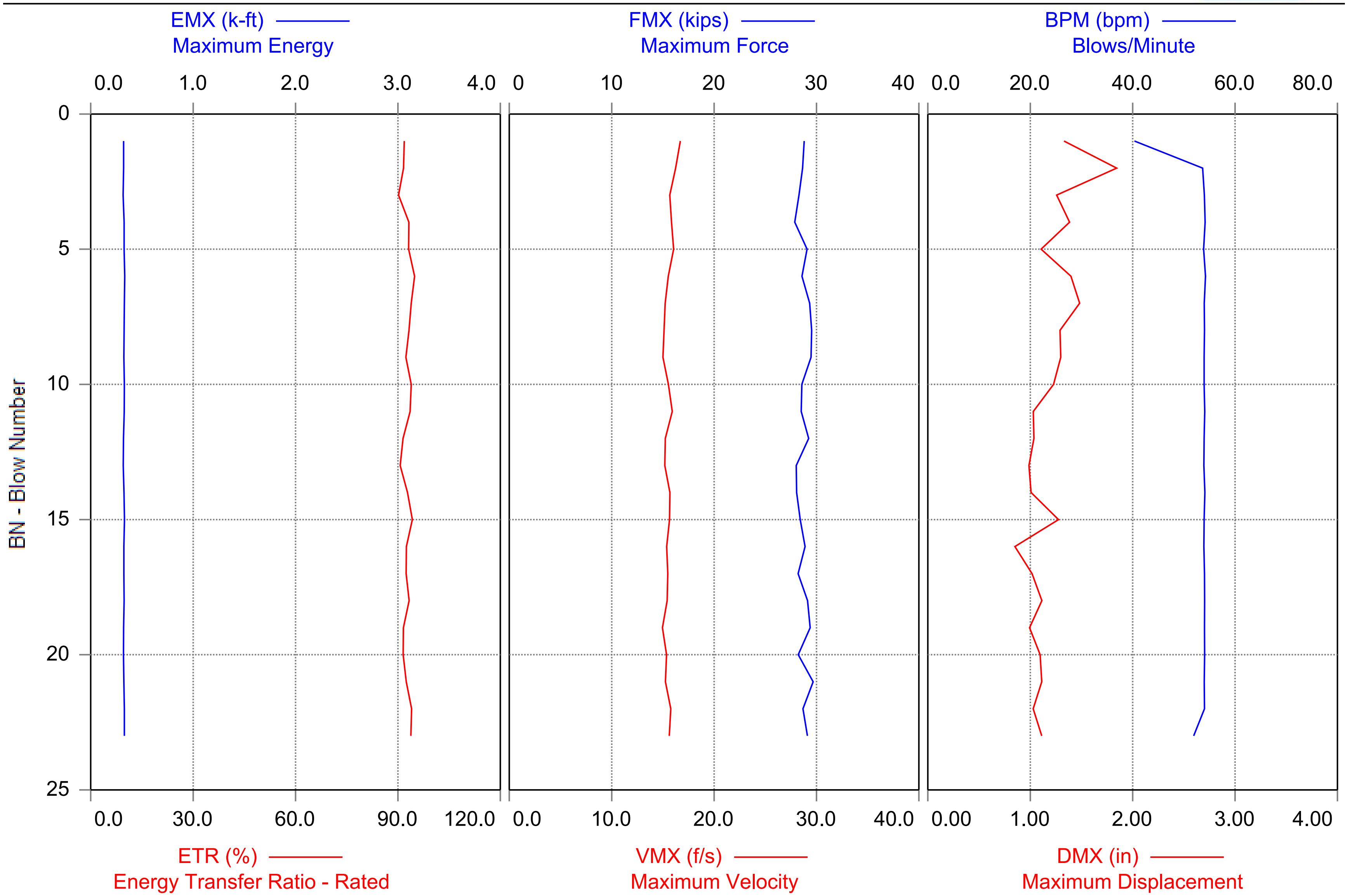
Time Summary

Drive 42 seconds 8:35 AM - 8:36 AM BN 1 - 39

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020 Test started: 08-October-2020

20.276 SPT - 36-38



20.276 SPT - 36-38 SPT-RIG 1
OP: DEV Date: 08-October-2020

AR: 1.19 in² SP: 0.492 k/ft³
LE: 38.80 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
1	36.00	0	0.322	91.9	28.8	16.7	40.3	1.33	1.33	0.318	2,850
2	36.00	0	0.321	91.6	28.6	16.2	53.7	1.84	1.84	0.318	3,113
3	36.00	0	0.316	90.2	28.3	15.7	54.0	1.26	1.26	0.316	2,620
4	36.00	0	0.326	93.2	27.9	15.8	54.2	1.38	1.38	0.318	2,791
5	36.00	0	0.326	93.1	29.1	16.0	53.9	1.11	1.06	0.318	3,033
6	36.00	0	0.332	94.9	28.6	15.5	54.2	1.40	1.38	0.319	2,791
7	36.00	0	0.329	93.9	29.3	15.2	54.0	1.48	1.44	0.318	3,147
8	36.00	0	0.326	93.2	29.5	15.1	54.0	1.29	1.25	0.318	3,424
9	36.00	0	0.323	92.3	29.5	15.0	54.0	1.30	1.26	0.316	3,400
10	36.00	0	0.329	93.9	28.6	15.5	54.0	1.23	1.17	0.322	2,591
11	36.00	0	0.327	93.6	28.5	15.9	54.1	1.03	0.97	0.319	2,678
12	36.00	0	0.320	91.5	29.2	15.2	54.0	1.04	0.97	0.318	3,031
13	36.00	0	0.317	90.6	28.0	15.2	53.9	0.99	0.93	0.315	2,632
14	36.00	0	0.325	92.8	28.1	15.7	54.1	1.01	0.94	0.315	2,590
15	36.00	0	0.330	94.2	28.4	15.6	54.0	1.28	1.22	0.318	2,612
16	36.00	0	0.324	92.5	28.9	15.4	53.9	0.85	0.79	0.318	3,252
17	36.00	0	0.323	92.4	28.2	15.5	54.0	1.02	0.97	0.319	3,070
18	36.00	0	0.326	93.3	29.1	15.4	54.1	1.11	1.06	0.317	3,297
19	36.00	0	0.321	91.6	29.4	15.0	54.0	0.99	0.95	0.321	3,029
20	36.00	0	0.320	91.5	28.2	15.4	54.1	1.10	1.05	0.319	2,722
21	36.00	0	0.323	92.4	29.7	15.3	54.0	1.11	1.08	0.318	3,323
22	36.00	0	0.329	94.0	28.7	15.8	54.0	1.03	1.01	0.318	2,705
23	36.00	0	0.328	93.8	29.1	15.6	51.9	1.11	1.11	0.317	3,070
		Average	0.324	92.7	28.8	15.6	53.3	1.19	1.15	0.318	2,947
		Std. Dev.	0.004	1.2	0.5	0.4	2.8	0.21	0.22	0.001	274
		Maximum	0.332	94.9	29.7	16.7	54.2	1.84	1.84	0.322	3,424
		Minimum	0.316	90.2	27.9	15.0	40.3	0.85	0.79	0.315	2,590

Total number of blows analyzed: 23

BL# Sensors

1-23 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

Time Summary

Drive 24 seconds 8:58 AM - 8:58 AM BN 1 - 23

20.276 SPT - 36-38
OP: DEV
SPT-RIG 1
Date: 08-October-2020

AR: 1.19 in²
LE: 38.80 ft
WS: 16,807.9 f/s
SP: 0.492 k/ft³
EM: 30,000 ksi
JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
5	36.00	0	0.326	93.1	29.1	16.0	53.9	1.11	1.06	0.318	3,033
6	36.00	0	0.332	94.9	28.6	15.5	54.2	1.40	1.38	0.319	2,791
7	36.00	0	0.329	93.9	29.3	15.2	54.0	1.48	1.44	0.318	3,147
8	36.00	0	0.326	93.2	29.5	15.1	54.0	1.29	1.25	0.318	3,424
9	36.00	0	0.323	92.3	29.5	15.0	54.0	1.30	1.26	0.316	3,400
10	36.00	0	0.329	93.9	28.6	15.5	54.0	1.23	1.17	0.322	2,591
11	36.00	0	0.327	93.6	28.5	15.9	54.1	1.03	0.97	0.319	2,678
12	36.00	0	0.320	91.5	29.2	15.2	54.0	1.04	0.97	0.318	3,031
13	36.00	0	0.317	90.6	28.0	15.2	53.9	0.99	0.93	0.315	2,632
14	36.00	0	0.325	92.8	28.1	15.7	54.1	1.01	0.94	0.315	2,590
15	36.00	0	0.330	94.2	28.4	15.6	54.0	1.28	1.22	0.318	2,612
16	36.00	0	0.324	92.5	28.9	15.4	53.9	0.85	0.79	0.318	3,252
17	36.00	0	0.323	92.4	28.2	15.5	54.0	1.02	0.97	0.319	3,070
18	36.00	0	0.326	93.3	29.1	15.4	54.1	1.11	1.06	0.317	3,297
19	36.00	0	0.321	91.6	29.4	15.0	54.0	0.99	0.95	0.321	3,029
20	36.00	0	0.320	91.5	28.2	15.4	54.1	1.10	1.05	0.319	2,722
21	36.00	0	0.323	92.4	29.7	15.3	54.0	1.11	1.08	0.318	3,323
22	36.00	0	0.329	94.0	28.7	15.8	54.0	1.03	1.01	0.318	2,705
23	36.00	0	0.328	93.8	29.1	15.6	51.9	1.11	1.11	0.317	3,070
		Average	0.325	92.9	28.8	15.4	53.9	1.13	1.08	0.318	2,968
		Std. Dev.	0.004	1.1	0.5	0.3	0.5	0.15	0.16	0.002	285
		Maximum	0.332	94.9	29.7	16.0	54.2	1.48	1.44	0.322	3,424
		Minimum	0.317	90.6	28.0	15.0	51.9	0.85	0.79	0.315	2,590

Total number of blows analyzed: 19

BL# Sensors

1-23 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

Time Summary

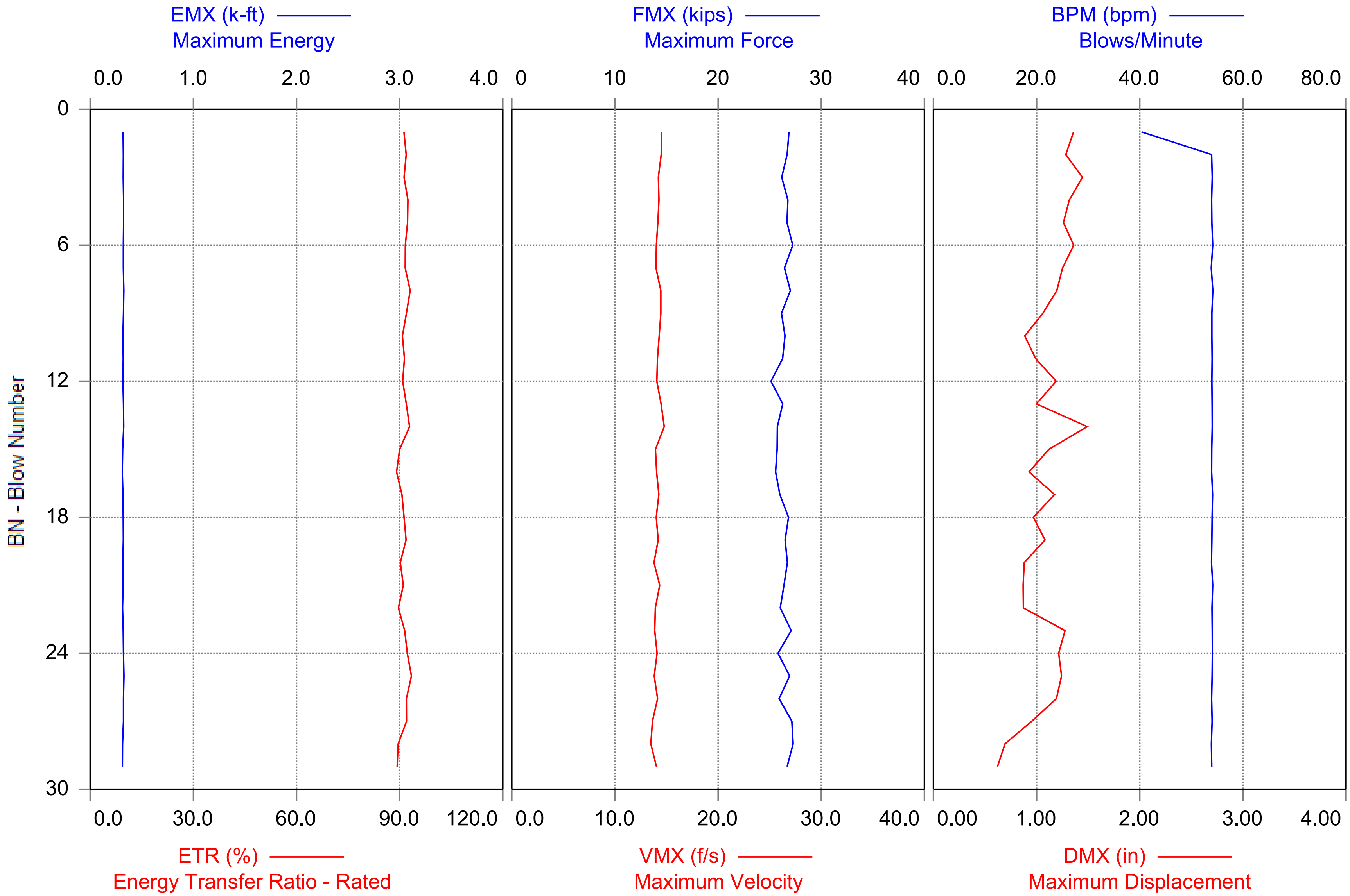
Drive 24 seconds 8:58 AM - 8:58 AM BN 1 - 23

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020

Test started: 08-October-2020

20.276 SPT - 38-40



20.276 SPT - 38-40 SPT-RIG 1
OP: DEV Date: 08-October-2020

AR: 1.19 in² SP: 0.492 k/ft³
LE: 40.80 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
1	36.00	0	0.319	91.2	26.9	14.5	40.3	1.36	1.33	0.309	2,855
2	36.00	0	0.322	91.9	26.7	14.5	53.9	1.28	1.25	0.308	2,750
3	36.00	0	0.319	91.3	26.2	14.2	54.1	1.44	1.44	0.305	2,765
4	36.00	0	0.323	92.4	26.8	14.3	53.9	1.32	1.28	0.313	3,321
5	36.00	0	0.323	92.3	26.7	14.1	54.0	1.26	1.22	0.313	2,779
6	36.00	0	0.321	91.6	27.2	14.0	54.2	1.36	1.33	0.312	3,056
7	36.00	0	0.321	91.6	26.4	14.0	53.9	1.25	1.19	0.311	2,914
8	36.00	0	0.326	93.1	27.0	14.4	54.2	1.20	1.16	0.308	3,154
9	36.00	0	0.322	92.0	26.1	14.4	54.0	1.06	1.02	0.312	3,131
10	36.00	0	0.318	90.8	26.5	14.3	54.0	0.89	0.84	0.309	3,189
11	36.00	0	0.320	91.4	26.2	14.1	54.0	0.99	0.95	0.307	3,274
12	36.00	0	0.318	90.9	25.1	14.1	54.0	1.19	1.15	0.313	3,265
13	36.00	0	0.322	91.9	26.3	14.5	54.0	1.00	0.96	0.314	2,898
14	36.00	0	0.325	92.9	25.7	14.8	54.1	1.49	1.46	0.310	3,110
15	36.00	0	0.315	90.0	25.7	13.9	54.0	1.12	1.08	0.310	3,314
16	36.00	0	0.312	89.1	25.6	14.0	53.9	0.93	0.88	0.306	3,369
17	36.00	0	0.317	90.7	26.0	14.3	54.1	1.17	1.13	0.309	3,399
18	36.00	0	0.319	91.3	26.8	14.0	54.0	0.97	0.91	0.314	2,716
19	36.00	0	0.321	91.8	26.5	14.2	54.0	1.08	1.03	0.312	2,835
20	36.00	0	0.316	90.2	26.7	13.8	53.9	0.88	0.83	0.309	2,821
21	36.00	0	0.319	91.0	26.4	14.3	54.2	0.87	0.82	0.307	3,204
22	36.00	0	0.314	89.6	26.0	13.9	54.0	0.87	0.83	0.309	3,361
23	36.00	0	0.320	91.5	27.1	13.8	54.1	1.28	1.22	0.312	2,847
24	36.00	0	0.323	92.2	25.8	14.1	54.1	1.21	1.18	0.309	3,381
25	36.00	0	0.327	93.4	26.9	13.8	54.0	1.24	1.22	0.313	2,677
26	36.00	0	0.322	91.9	25.9	14.1	53.9	1.19	1.18	0.312	3,174
27	36.00	0	0.322	92.0	27.1	13.6	54.0	0.95	0.93	0.315	2,561
28	36.00	0	0.313	89.6	27.3	13.5	53.9	0.69	0.62	0.316	2,883
29	36.00	0	0.312	89.3	26.7	14.0	54.0	0.62	0.57	0.315	3,245
		Average	0.320	91.3	26.4	14.1	53.5	1.11	1.07	0.311	3,043
		Std. Dev.	0.004	1.1	0.5	0.3	2.5	0.21	0.22	0.003	247
		Maximum	0.327	93.4	27.3	14.8	54.2	1.49	1.46	0.316	3,399
		Minimum	0.312	89.1	25.1	13.5	40.3	0.62	0.57	0.305	2,561

Total number of blows analyzed: 29

BL# Sensors

1-29 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

Time Summary

Drive 31 seconds 9:20 AM - 9:21 AM BN 1 - 29

20.276 SPT - 38-40
OP: DEV
SPT-RIG 1
Date: 08-October-2020

AR: 1.19 in²
LE: 40.80 ft
WS: 16,807.9 f/s
SP: 0.492 k/ft³
EM: 30,000 ksi
JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
11	36.00	0	0.320	91.4	26.2	14.1	54.0	0.99	0.95	0.307	3,274
12	36.00	0	0.318	90.9	25.1	14.1	54.0	1.19	1.15	0.313	3,265
13	36.00	0	0.322	91.9	26.3	14.5	54.0	1.00	0.96	0.314	2,898
14	36.00	0	0.325	92.9	25.7	14.8	54.1	1.49	1.46	0.310	3,110
15	36.00	0	0.315	90.0	25.7	13.9	54.0	1.12	1.08	0.310	3,314
16	36.00	0	0.312	89.1	25.6	14.0	53.9	0.93	0.88	0.306	3,369
17	36.00	0	0.317	90.7	26.0	14.3	54.1	1.17	1.13	0.309	3,399
18	36.00	0	0.319	91.3	26.8	14.0	54.0	0.97	0.91	0.314	2,716
19	36.00	0	0.321	91.8	26.5	14.2	54.0	1.08	1.03	0.312	2,835
20	36.00	0	0.316	90.2	26.7	13.8	53.9	0.88	0.83	0.309	2,821
21	36.00	0	0.319	91.0	26.4	14.3	54.2	0.87	0.82	0.307	3,204
22	36.00	0	0.314	89.6	26.0	13.9	54.0	0.87	0.83	0.309	3,361
23	36.00	0	0.320	91.5	27.1	13.8	54.1	1.28	1.22	0.312	2,847
24	36.00	0	0.323	92.2	25.8	14.1	54.1	1.21	1.18	0.309	3,381
25	36.00	0	0.327	93.4	26.9	13.8	54.0	1.24	1.22	0.313	2,677
26	36.00	0	0.322	91.9	25.9	14.1	53.9	1.19	1.18	0.312	3,174
27	36.00	0	0.322	92.0	27.1	13.6	54.0	0.95	0.93	0.315	2,561
28	36.00	0	0.313	89.6	27.3	13.5	53.9	0.69	0.62	0.316	2,883
29	36.00	0	0.312	89.3	26.7	14.0	54.0	0.62	0.57	0.315	3,245
		Average	0.319	91.1	26.3	14.0	54.0	1.04	1.00	0.311	3,070
		Std. Dev.	0.004	1.2	0.6	0.3	0.1	0.21	0.22	0.003	267
		Maximum	0.327	93.4	27.3	14.8	54.2	1.49	1.46	0.316	3,399
		Minimum	0.312	89.1	25.1	13.5	53.9	0.62	0.57	0.306	2,561

Total number of blows analyzed: 19

BL# Sensors

1-29 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

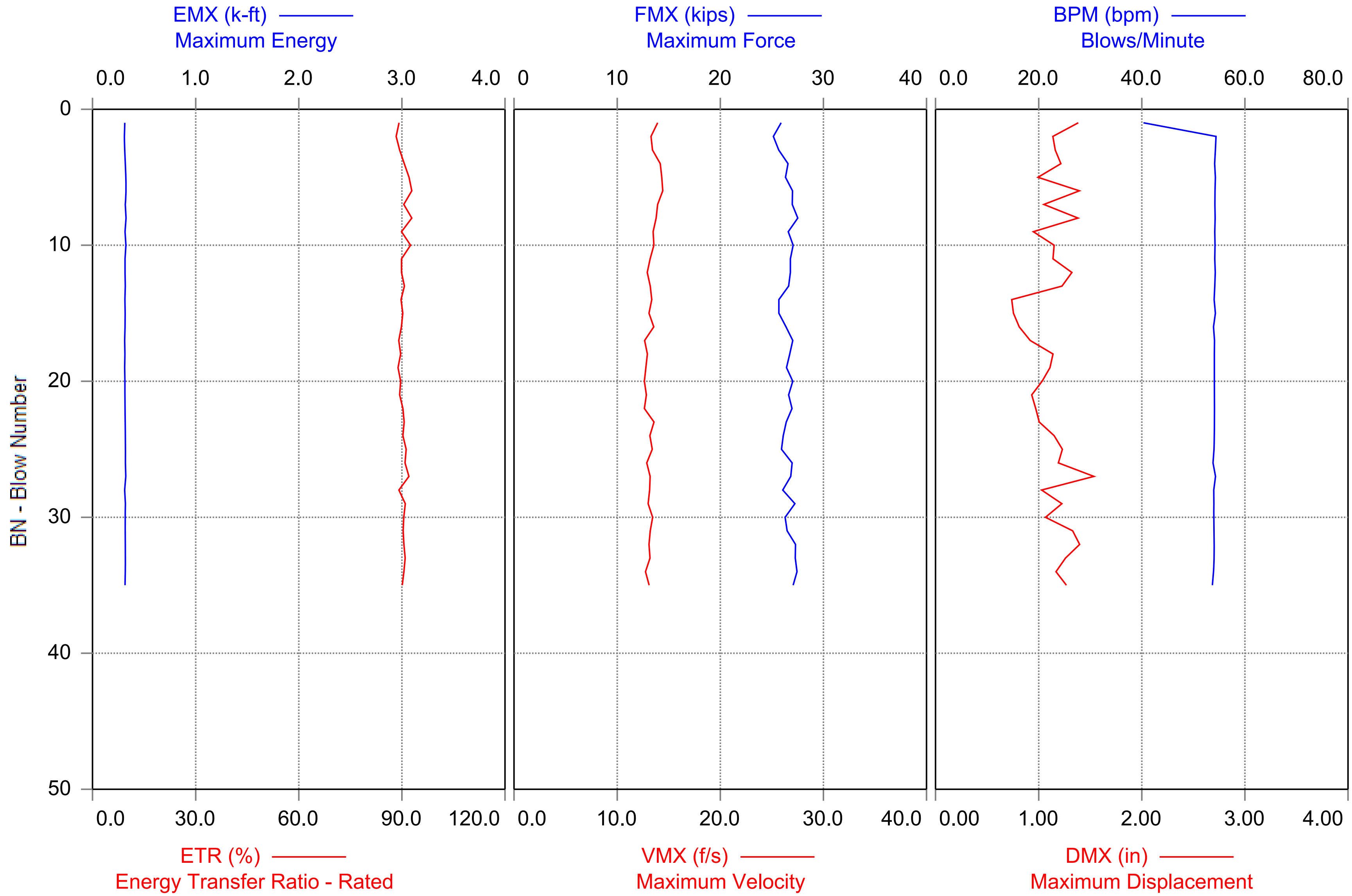
Time Summary

Drive 31 seconds 9:20 AM - 9:21 AM BN 1 - 29

Geosciences Testing & Research Inc - PDIPLOT2 Ver 2017.2.58.3 - Case Method & iCAP® Results

Printed: 15-October-2020 Test started: 08-October-2020

20.276 SPT - 40-42



20.276 SPT - 40-42 SPT-RIG 1
OP: DEV Date: 08-October-2020

AR: 1.19 in² SP: 0.492 k/ft³
LE: 43.80 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute
DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
1	36.00	0	0.312	89.2	25.9	13.9	40.3	1.38	1.36	0.313	2,887
2	36.00	0	0.309	88.3	25.2	13.3	54.4	1.14	1.11	0.310	2,785
3	36.00	0	0.313	89.3	25.7	13.4	54.3	1.16	1.12	0.308	3,021
4	36.00	0	0.317	90.7	26.6	14.2	54.1	1.21	1.16	0.311	2,603
5	36.00	0	0.322	92.1	26.3	14.3	54.3	0.99	0.94	0.311	3,083
6	36.00	0	0.325	92.9	27.0	14.4	54.2	1.39	1.35	0.313	2,977
7	36.00	0	0.317	90.5	27.0	13.9	54.2	1.05	0.99	0.315	3,008
8	36.00	0	0.325	92.9	27.5	13.8	54.2	1.38	1.31	0.312	2,802
9	36.00	0	0.315	89.9	26.6	13.5	54.2	0.95	0.87	0.314	2,831
10	36.00	0	0.324	92.5	27.1	13.6	54.2	1.15	1.06	0.311	2,498
11	36.00	0	0.315	89.9	26.8	13.2	54.2	1.14	1.06	0.310	2,681
12	36.00	0	0.315	89.9	26.8	12.9	54.2	1.32	1.26	0.312	2,491
13	36.00	0	0.318	90.7	26.6	13.2	54.2	1.23	1.16	0.315	2,948
14	36.00	0	0.314	89.7	25.7	13.3	54.0	0.74	0.64	0.310	3,042
15	36.00	0	0.316	90.2	25.7	13.1	54.3	0.76	0.67	0.311	2,994
16	36.00	0	0.314	89.8	26.4	13.5	53.9	0.81	0.73	0.312	2,996
17	36.00	0	0.312	89.1	27.0	12.7	54.1	0.92	0.84	0.314	2,434
18	36.00	0	0.314	89.6	26.7	12.9	54.1	1.14	1.09	0.313	2,895
19	36.00	0	0.311	88.9	26.4	12.8	54.0	1.11	1.08	0.307	2,868
20	36.00	0	0.314	89.6	27.0	12.6	54.1	1.03	1.00	0.312	2,411
21	36.00	0	0.313	89.3	26.6	12.8	54.1	0.93	0.89	0.309	2,687
22	36.00	0	0.316	90.3	27.0	12.6	54.1	0.97	0.94	0.312	2,724
23	36.00	0	0.317	90.6	26.4	13.6	54.1	1.01	0.98	0.311	2,821
24	36.00	0	0.316	90.3	26.1	13.2	54.1	1.15	1.10	0.308	2,962
25	36.00	0	0.319	91.2	25.9	13.4	54.0	1.23	1.21	0.310	3,030
26	36.00	0	0.318	90.9	27.0	12.9	53.8	1.19	1.19	0.310	2,749
27	36.00	0	0.322	92.0	26.8	13.2	54.3	1.54	1.52	0.309	2,595
28	36.00	0	0.312	89.1	26.1	13.1	54.0	1.03	1.01	0.310	2,972
29	36.00	0	0.318	91.0	27.2	13.0	54.0	1.23	1.21	0.312	2,803
30	36.00	0	0.317	90.6	26.3	13.4	54.0	1.07	1.06	0.311	2,997
31	36.00	0	0.316	90.4	26.5	13.2	54.0	1.33	1.32	0.310	2,929
32	36.00	0	0.317	90.6	27.3	13.1	54.0	1.40	1.39	0.307	2,537
33	36.00	0	0.318	90.9	27.3	13.2	54.0	1.26	1.24	0.310	2,740
34	36.00	0	0.317	90.6	27.4	12.7	53.9	1.17	1.15	0.313	2,652
35	36.00	0	0.315	90.1	27.1	13.1	53.7	1.27	1.27	0.309	2,741
		Average	0.316	90.4	26.6	13.3	53.7	1.14	1.09	0.311	2,806
		Std. Dev.	0.004	1.1	0.6	0.5	2.3	0.18	0.20	0.002	188
		Maximum	0.325	92.9	27.5	14.4	54.4	1.54	1.52	0.315	3,083
		Minimum	0.309	88.3	25.2	12.6	40.3	0.74	0.64	0.307	2,411

Total number of blows analyzed: 35

BL# Sensors

1-35 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

Time Summary

Drive 37 seconds 9:37 AM - 9:38 AM BN 1 - 35

20.276 SPT - 40-42
OP: DEV

SPT-RIG 1
Date: 08-October-2020

AR: 1.19 in²
LE: 43.80 ft
WS: 16,807.9 f/s

SP: 0.492 k/ft³
EM: 30,000 ksi
JC: 0.70

EMX: Maximum Energy
ETR: Energy Transfer Ratio - Rated
FMX: Maximum Force
VMX: Maximum Velocity
BPM: Blows/Minute

DMX: Maximum Displacement
DFN: Final Displacement
EF2: Energy of F² (ASTM D4633)
AMX: Maximum Acceleration

BL#	Depth	BLC	EMX	ETR	FMX	VMX	BPM	DMX	DFN	EF2	AMX
	ft	bl/ft	k-ft	(%)	kips	f/s	bpm	in	in	k-ft	g's
7	36.00	0	0.317	90.5	27.0	13.9	54.2	1.05	0.99	0.315	3,008
8	36.00	0	0.325	92.9	27.5	13.8	54.2	1.38	1.31	0.312	2,802
9	36.00	0	0.315	89.9	26.6	13.5	54.2	0.95	0.87	0.314	2,831
10	36.00	0	0.324	92.5	27.1	13.6	54.2	1.15	1.06	0.311	2,498
11	36.00	0	0.315	89.9	26.8	13.2	54.2	1.14	1.06	0.310	2,681
12	36.00	0	0.315	89.9	26.8	12.9	54.2	1.32	1.26	0.312	2,491
13	36.00	0	0.318	90.7	26.6	13.2	54.2	1.23	1.16	0.315	2,948
14	36.00	0	0.314	89.7	25.7	13.3	54.0	0.74	0.64	0.310	3,042
15	36.00	0	0.316	90.2	25.7	13.1	54.3	0.76	0.67	0.311	2,994
16	36.00	0	0.314	89.8	26.4	13.5	53.9	0.81	0.73	0.312	2,996
17	36.00	0	0.312	89.1	27.0	12.7	54.1	0.92	0.84	0.314	2,434
18	36.00	0	0.314	89.6	26.7	12.9	54.1	1.14	1.09	0.313	2,895
19	36.00	0	0.311	88.9	26.4	12.8	54.0	1.11	1.08	0.307	2,868
20	36.00	0	0.314	89.6	27.0	12.6	54.1	1.03	1.00	0.312	2,411
21	36.00	0	0.313	89.3	26.6	12.8	54.1	0.93	0.89	0.309	2,687
22	36.00	0	0.316	90.3	27.0	12.6	54.1	0.97	0.94	0.312	2,724
23	36.00	0	0.317	90.6	26.4	13.6	54.1	1.01	0.98	0.311	2,821
24	36.00	0	0.316	90.3	26.1	13.2	54.1	1.15	1.10	0.308	2,962
25	36.00	0	0.319	91.2	25.9	13.4	54.0	1.23	1.21	0.310	3,030
26	36.00	0	0.318	90.9	27.0	12.9	53.8	1.19	1.19	0.310	2,749
		Average	0.316	90.3	26.6	13.2	54.1	1.06	1.00	0.311	2,794
		Std. Dev.	0.003	1.0	0.5	0.4	0.1	0.17	0.18	0.002	200
		Maximum	0.325	92.9	27.5	13.9	54.3	1.38	1.31	0.315	3,042
		Minimum	0.311	88.9	25.7	12.6	53.8	0.74	0.64	0.307	2,411

Total number of blows analyzed: 20

BL# Sensors

1-35 F1: [SPT2] 211.2 (1.00); F2: [SPT1] 211.2 (1.00); A3: [K4807] 348.0 (1.00);
A4: [K10400] 342.0 (1.00)

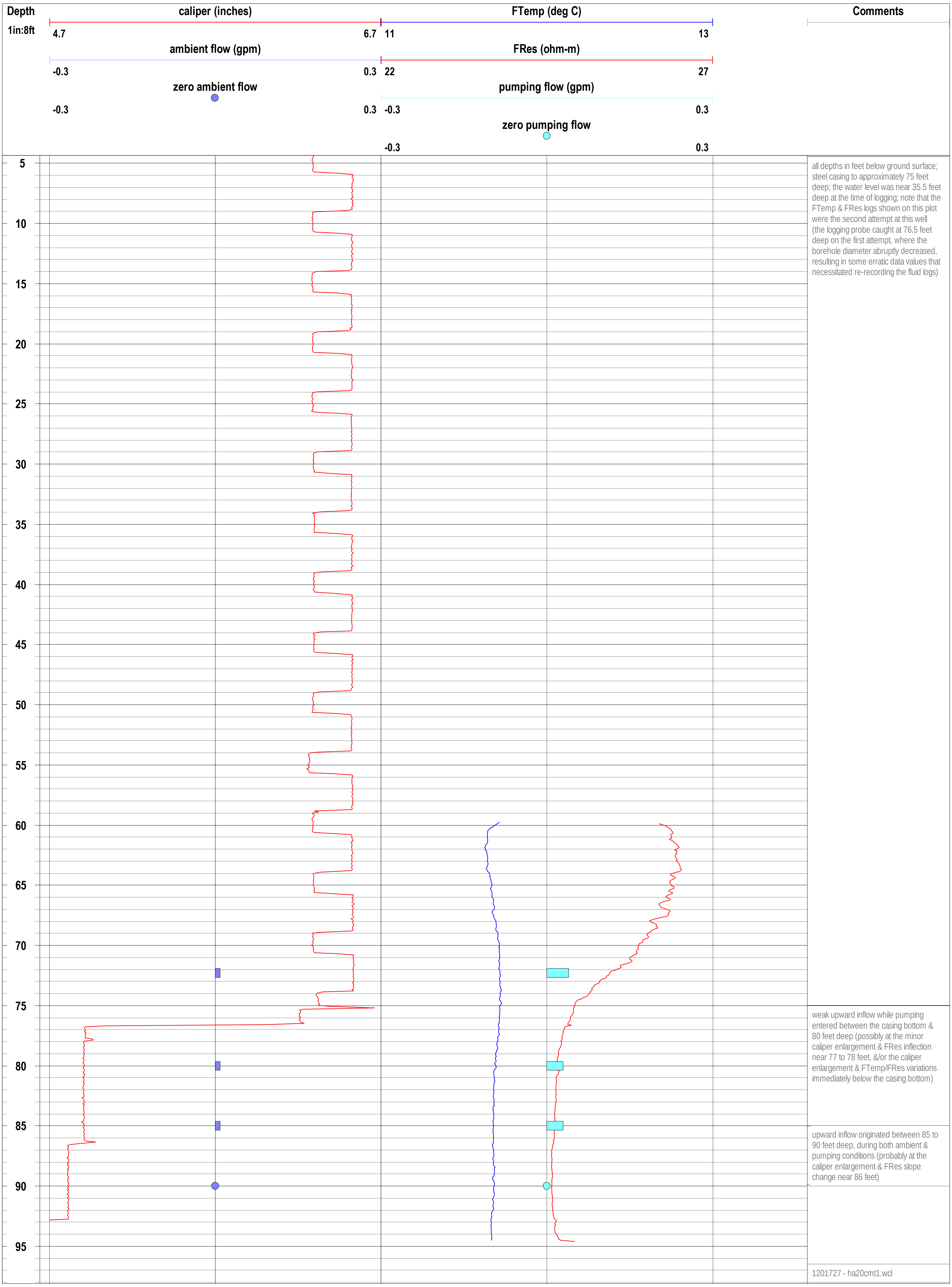
Time Summary

Drive 37 seconds 9:37 AM - 9:38 AM BN 1 - 35

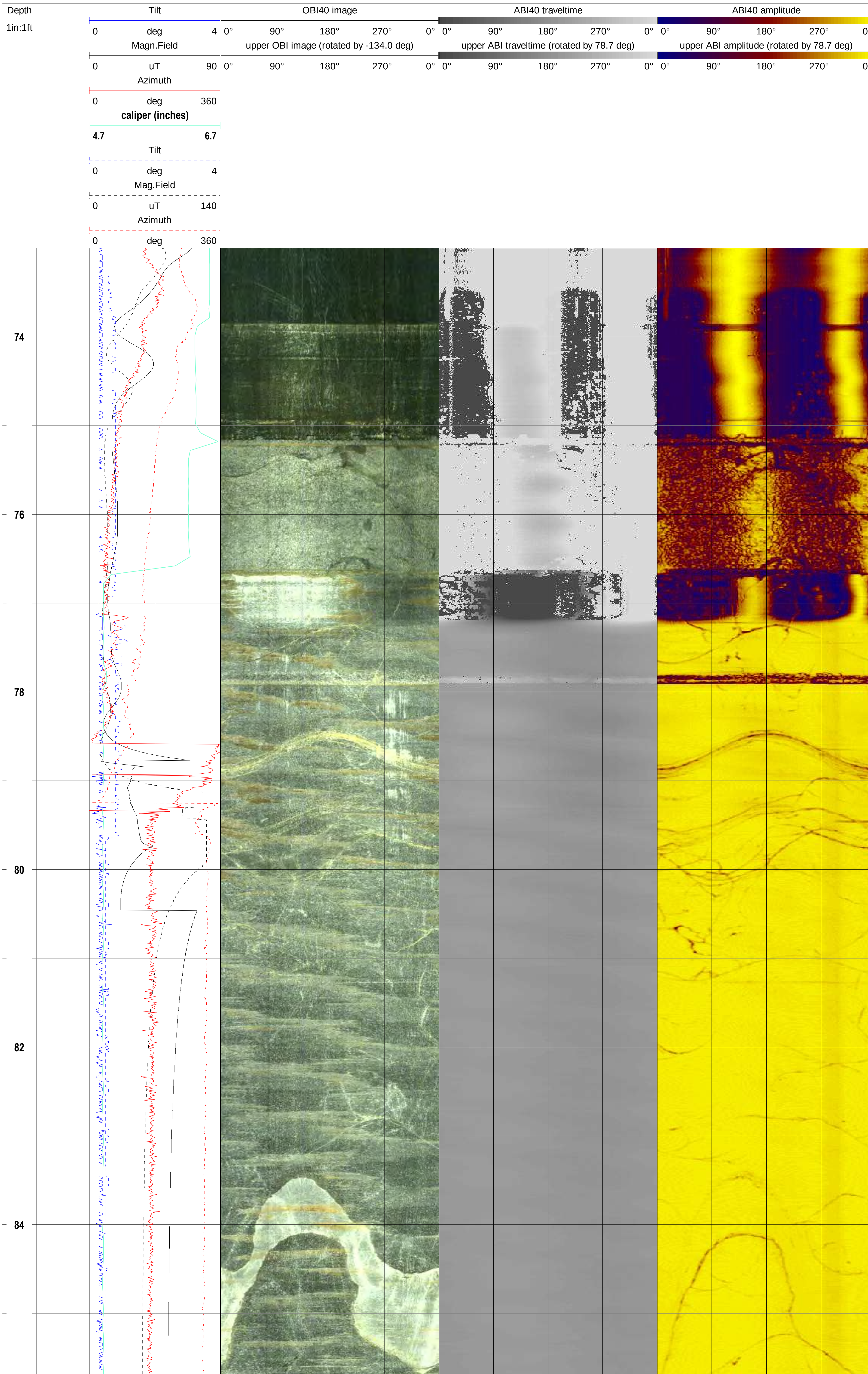
EXHIBIT HB1-2

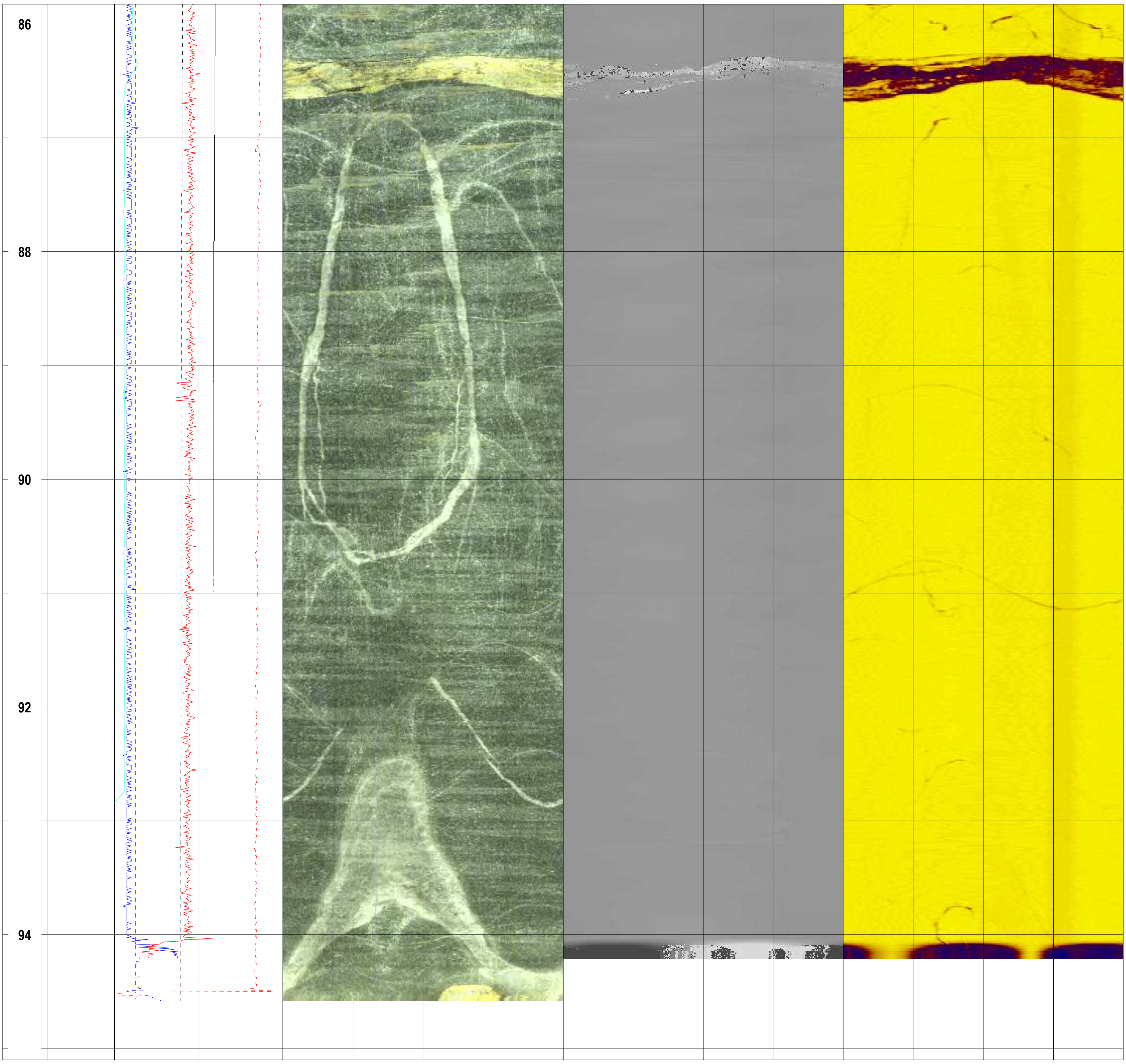
Geophysical Borehole Logs

Haley & Aldrich / Concord, MA - HA20-CMT-1 conventional log plot

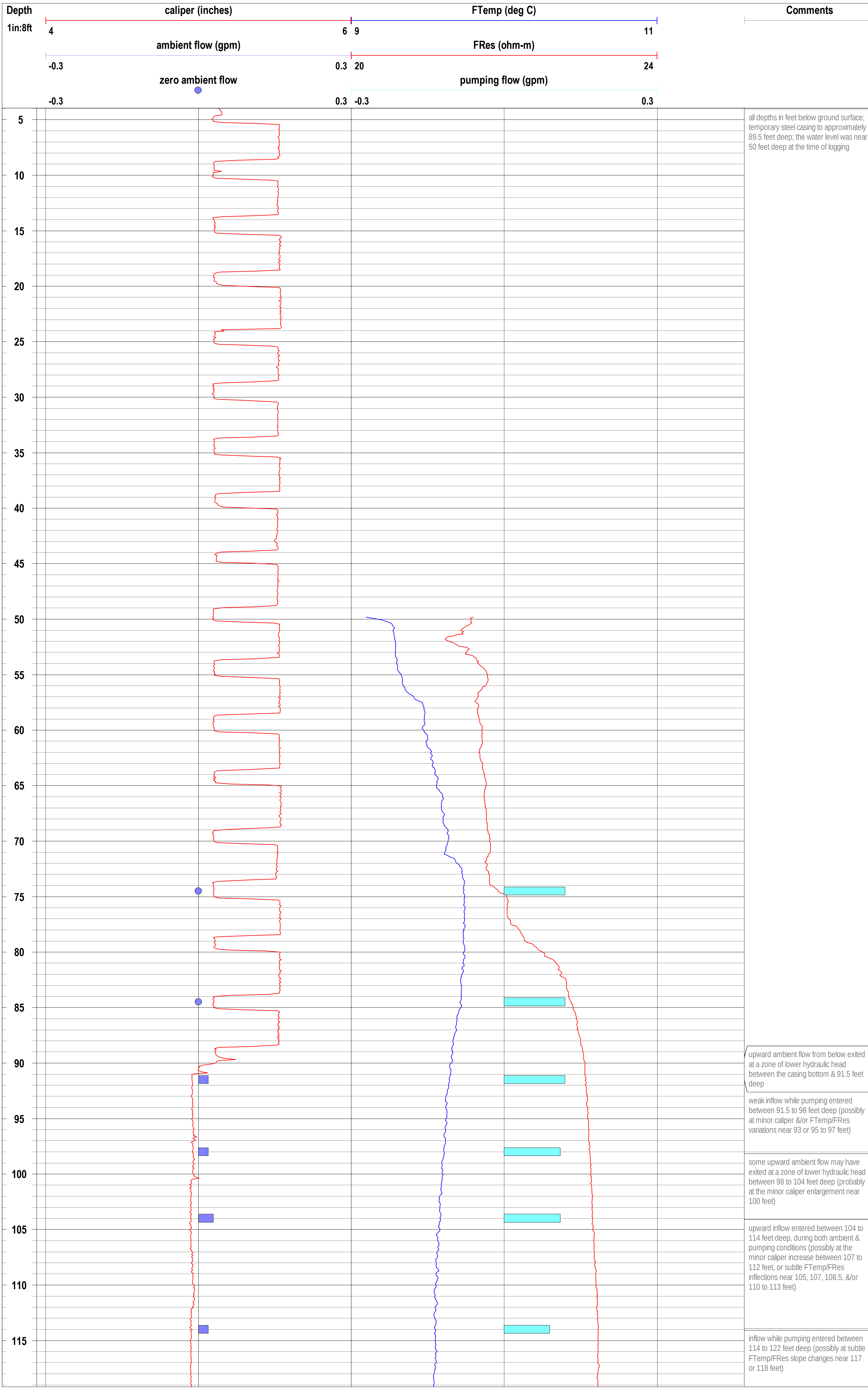


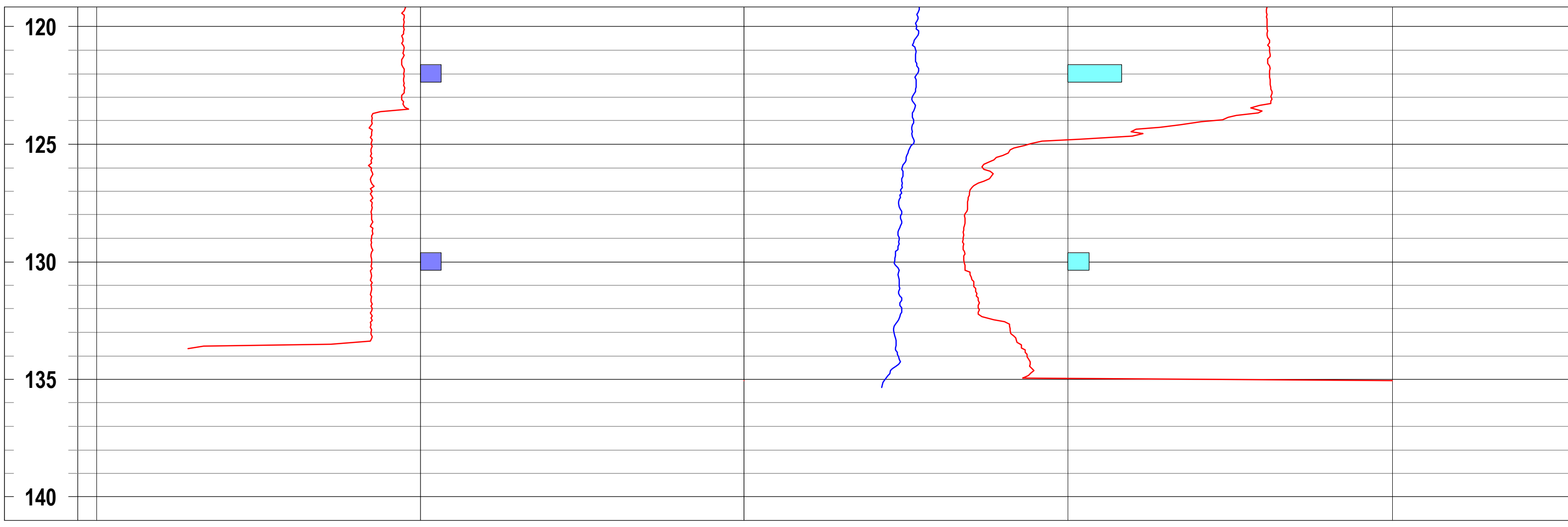
Haley & Aldrich / Concord, MA - HA20-CMT-1 optical & acoustic televiewer log plot




86
88
90
92
94

Haley & Aldrich / Concord, MA - HA20-CMT-2 conventional log plot



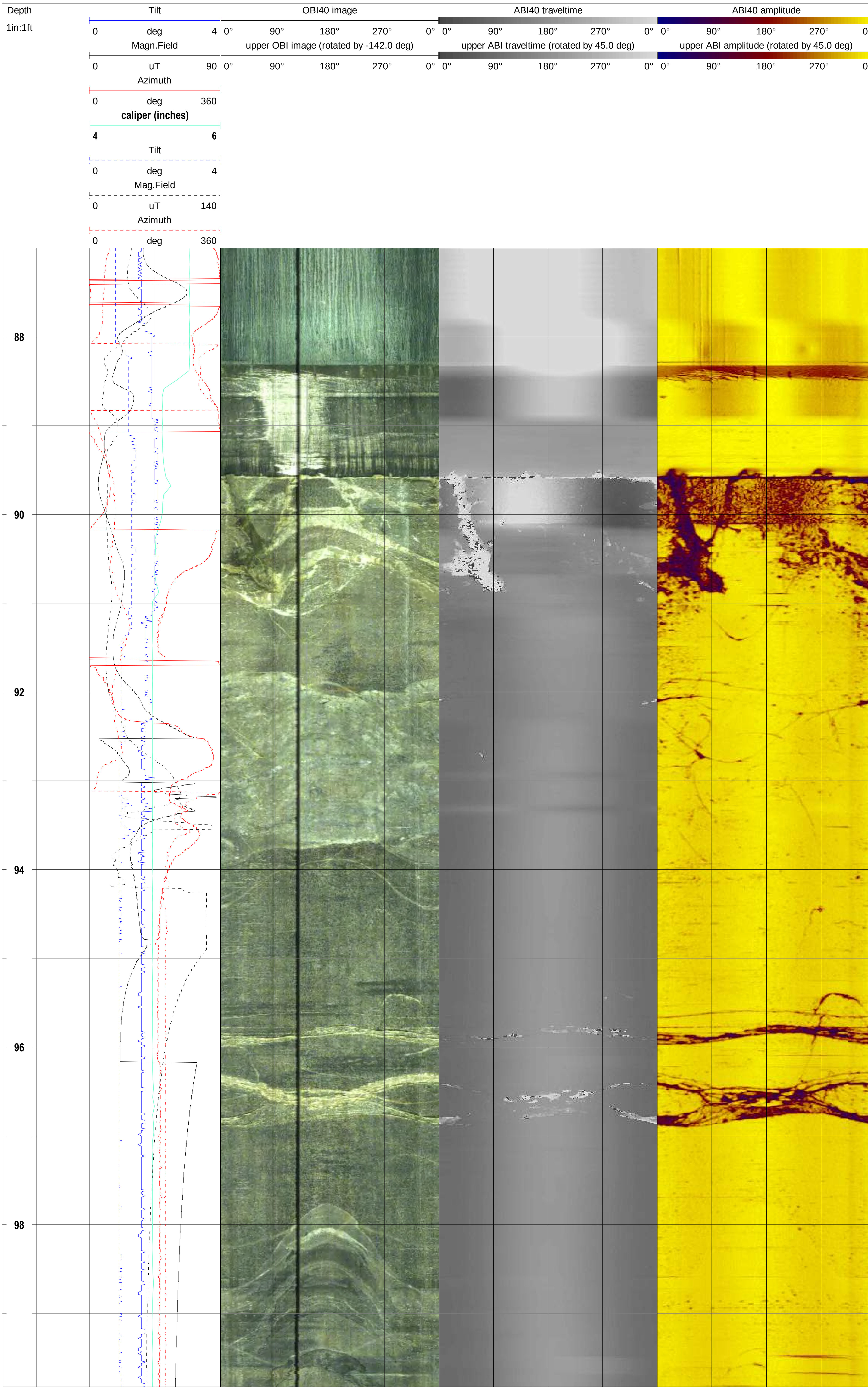


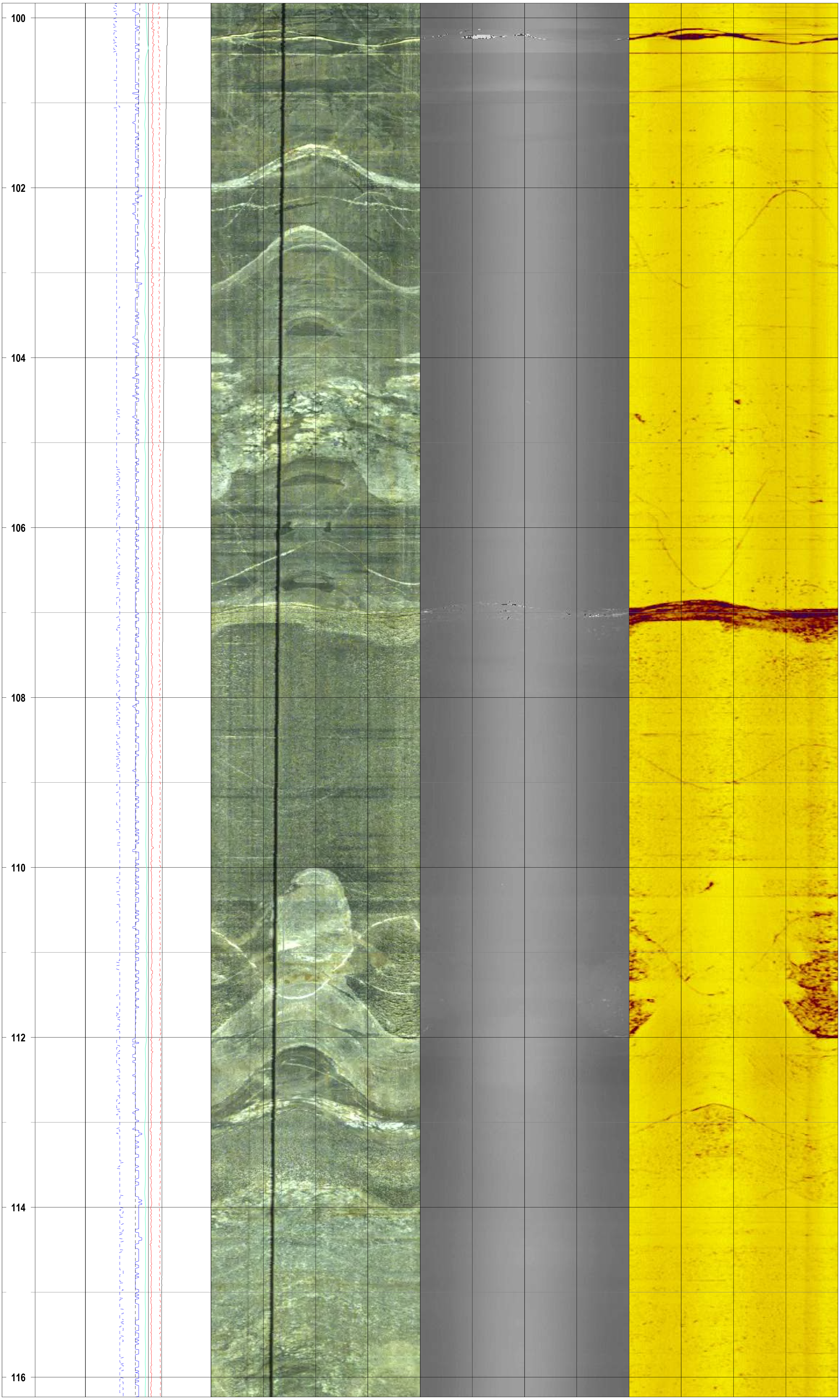
inflow while pumping entered between 122 to 130 feet deep (probably at the caliper enlargement & FRes decrease near 123.5 feet, & possibly also at FTemp/FRes variations near 126 &/or 129 feet)

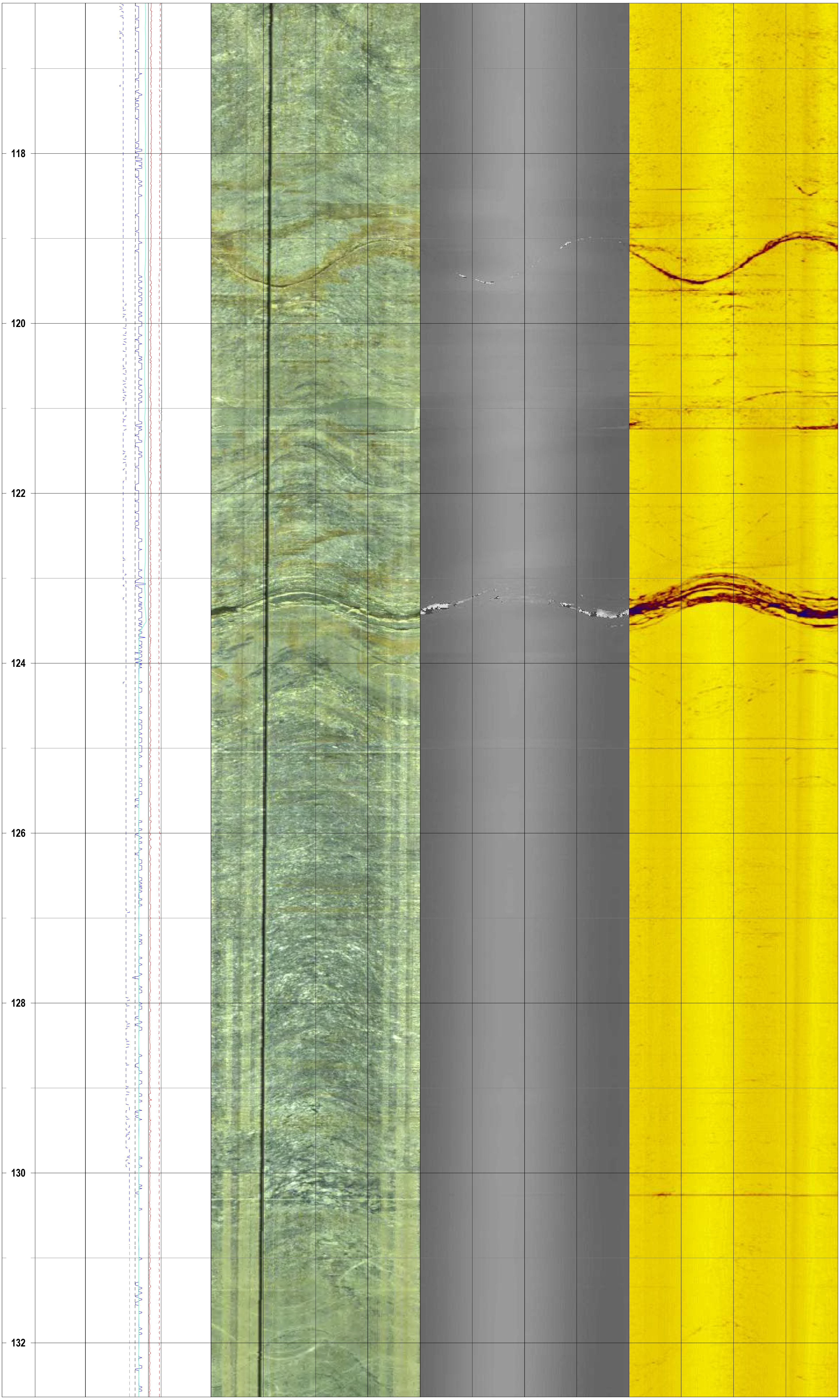
weak upward flow originated greater than 130 feet deep, during both ambient & pumping conditions (possibly near the FTemp & FRes inflections near 130, 132.5 &/or 134 feet); the FRes increase near 135 feet likely represents some drilling residue at the bottom of the borehole

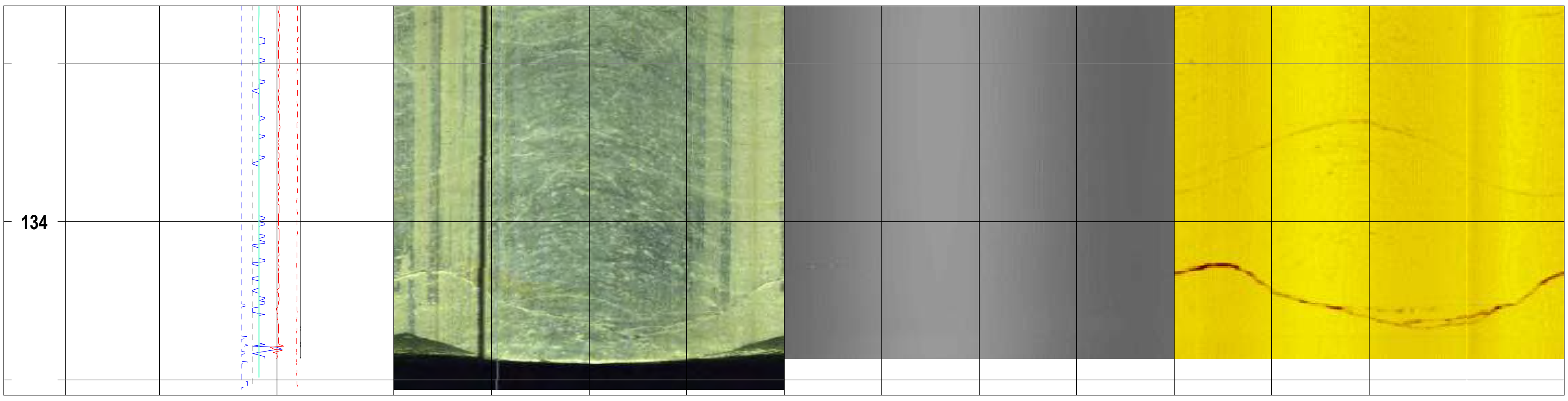
1201727 - ha20cmt2.wcl

Haley & Aldrich / Concord, MA - HA20-CMT-2 optical & acoustic televiewer log plot

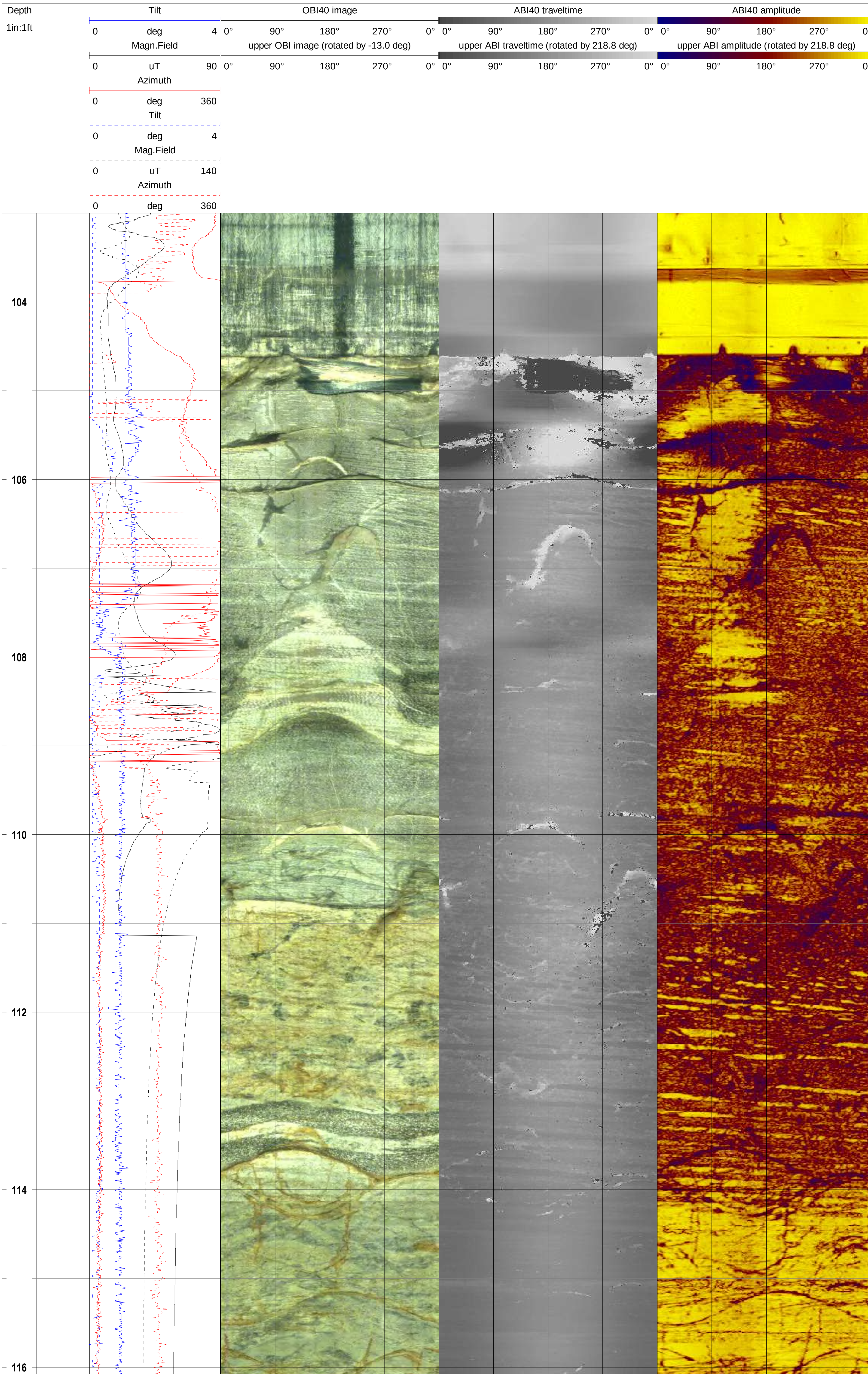


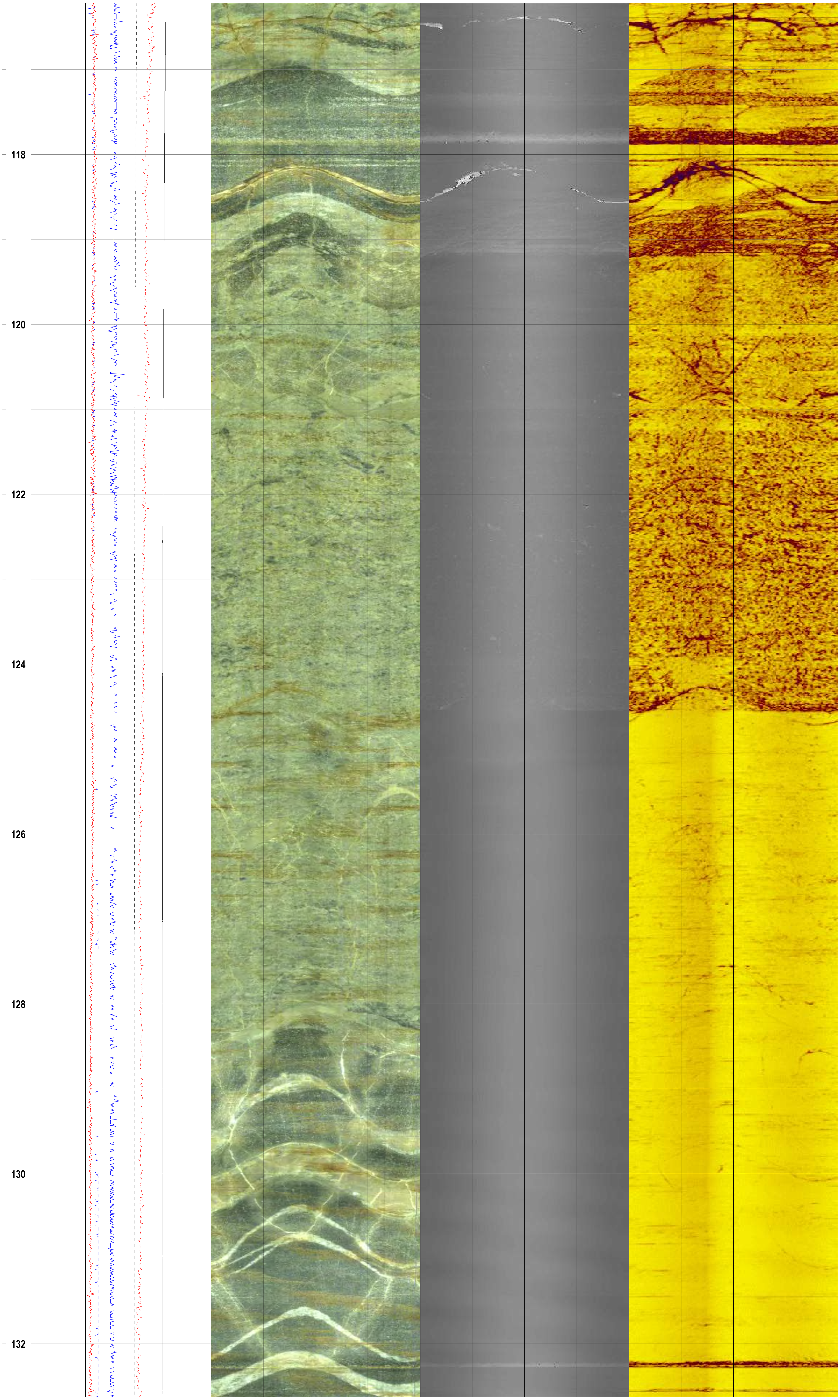

100
102
104
106
108
110
112
114
116

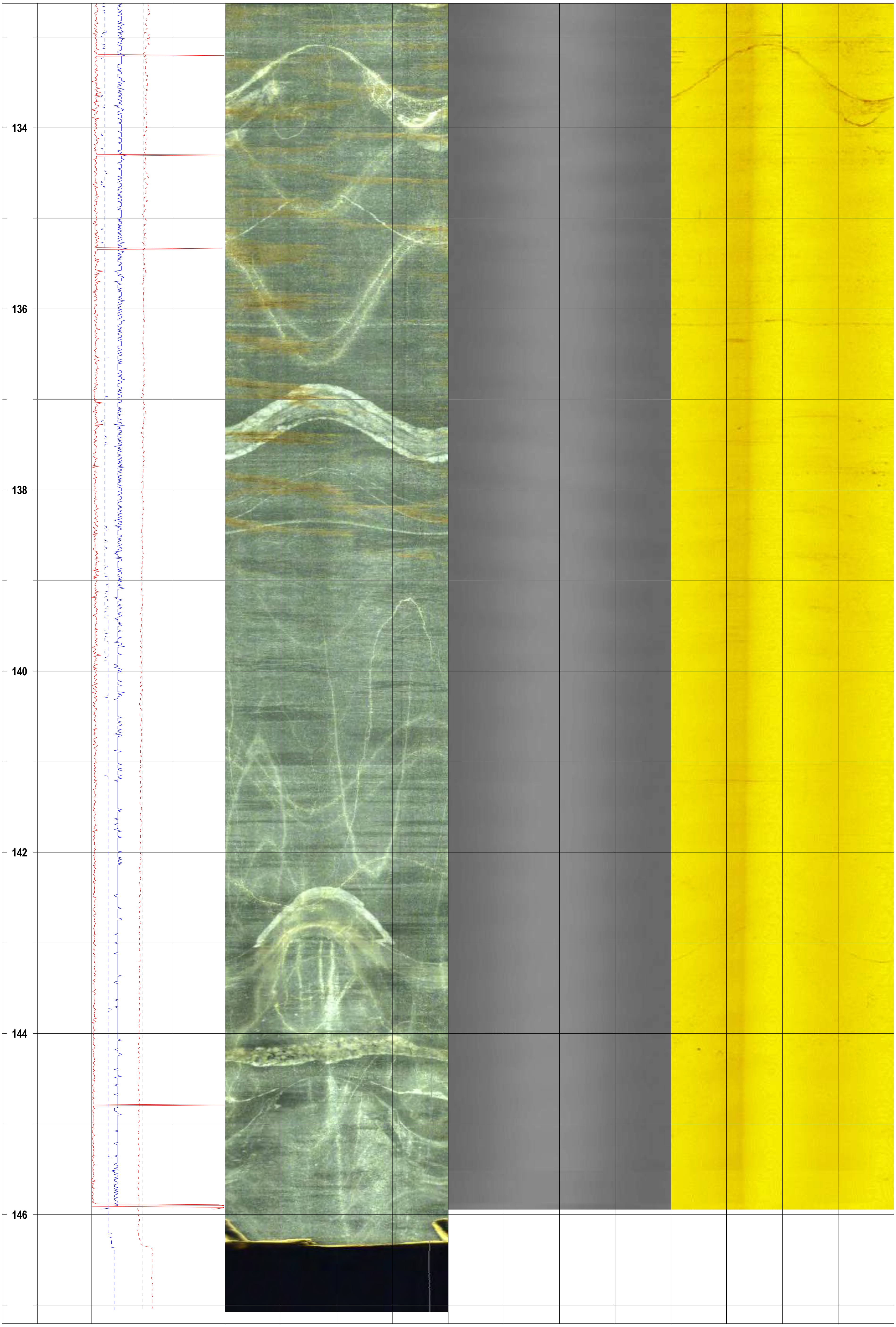

118
120
122
124
126
128
130
132


134

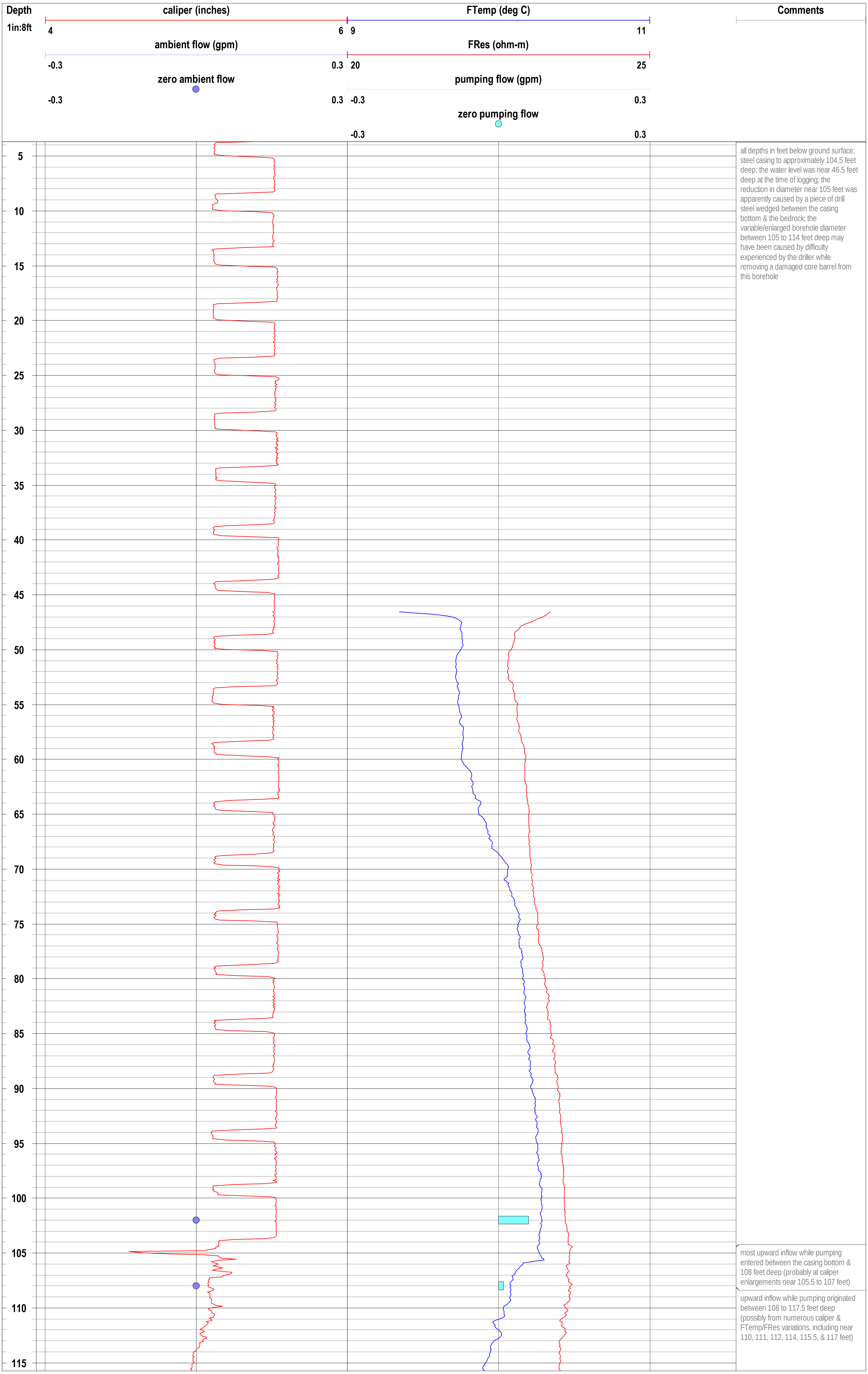
Haley & Aldrich / Concord, MA - HA20-CMT-3 optical & acoustic televiewer log plot




118
120
122
124
126
128
130
132

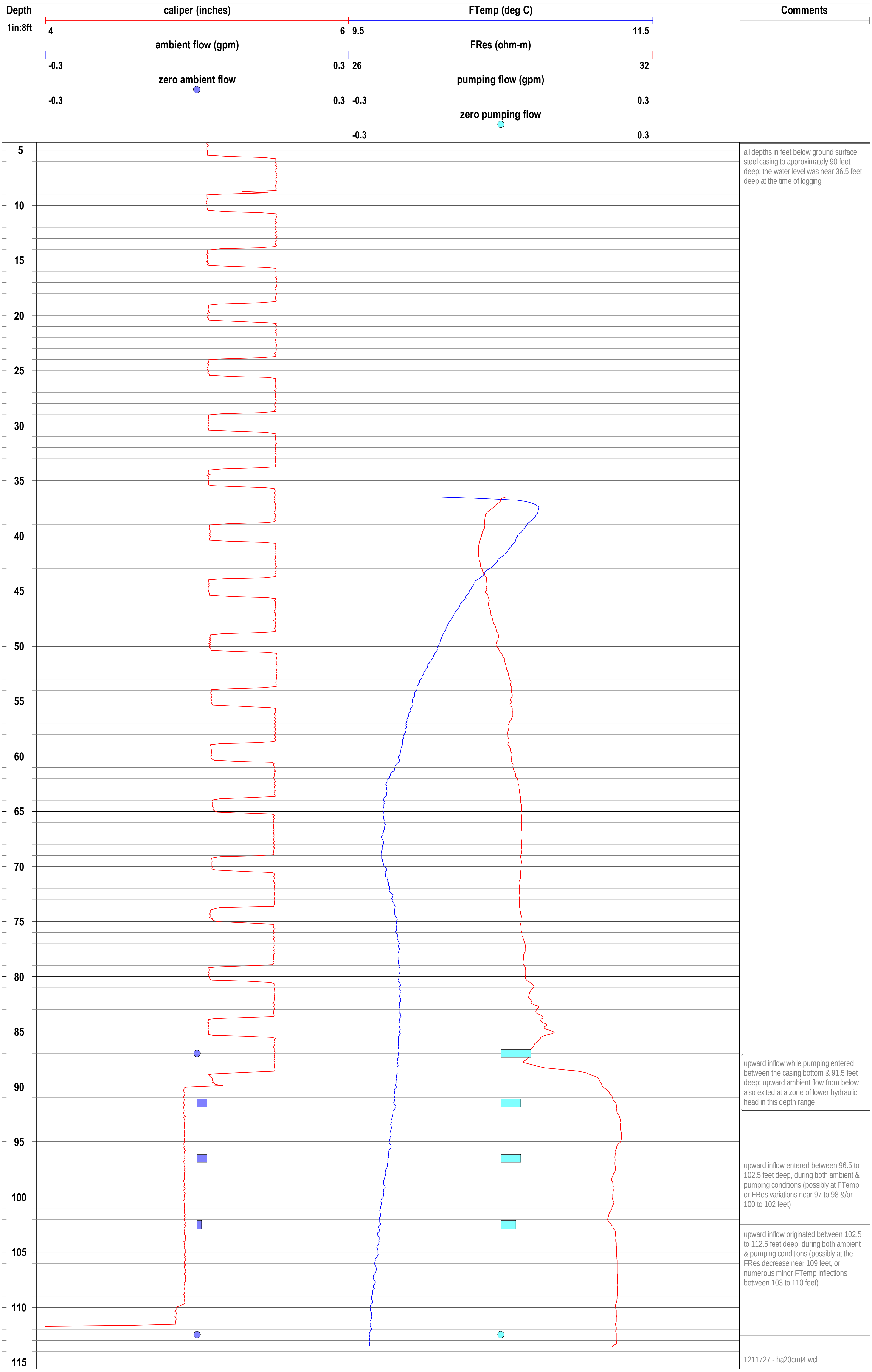

134
136
138
140
142
144
146

Haley & Aldrich / Concord, MA - HA20-CMT-3 conventional log plot



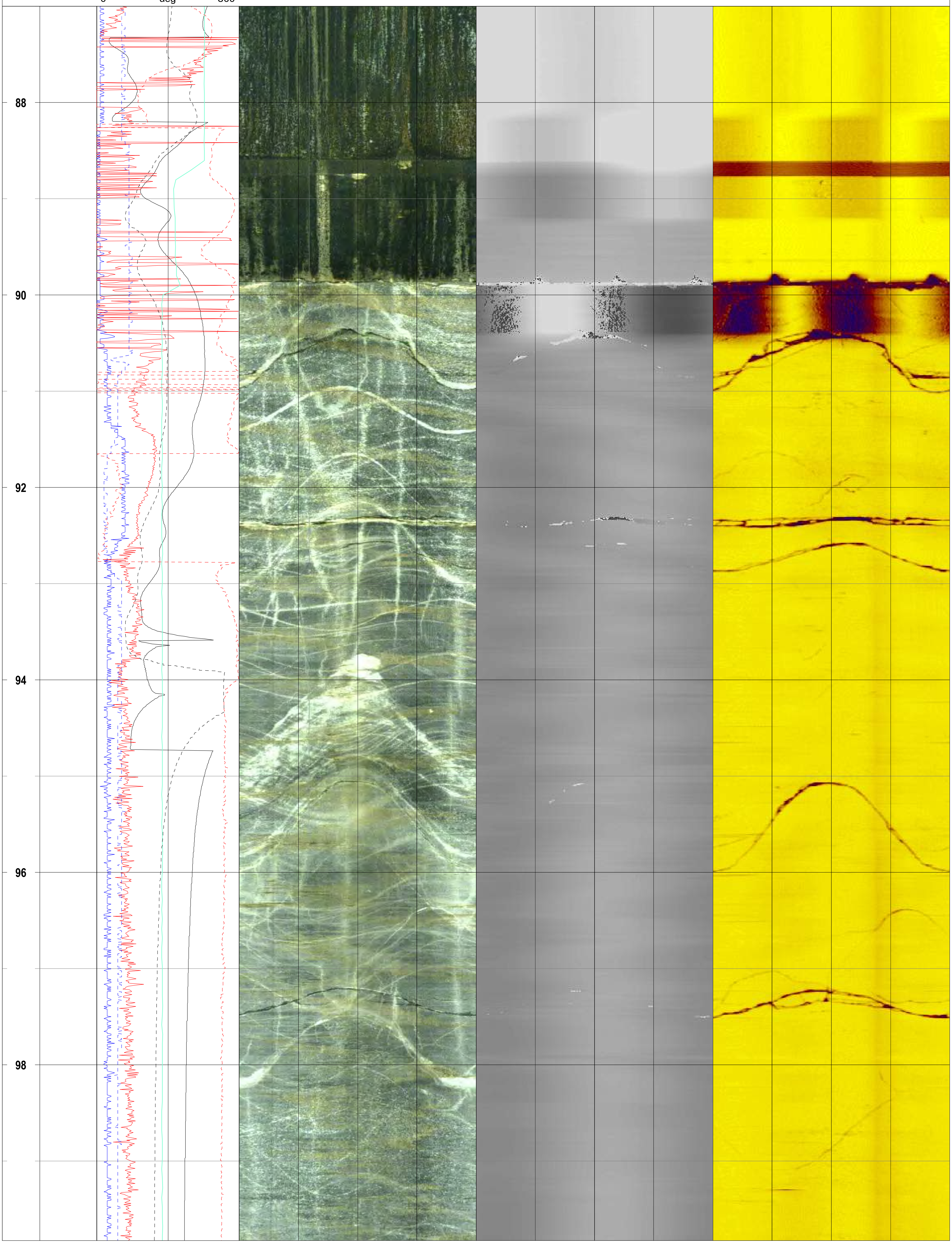

120
125
130
135
140
145
1201727 - ha20cmt3.wcl

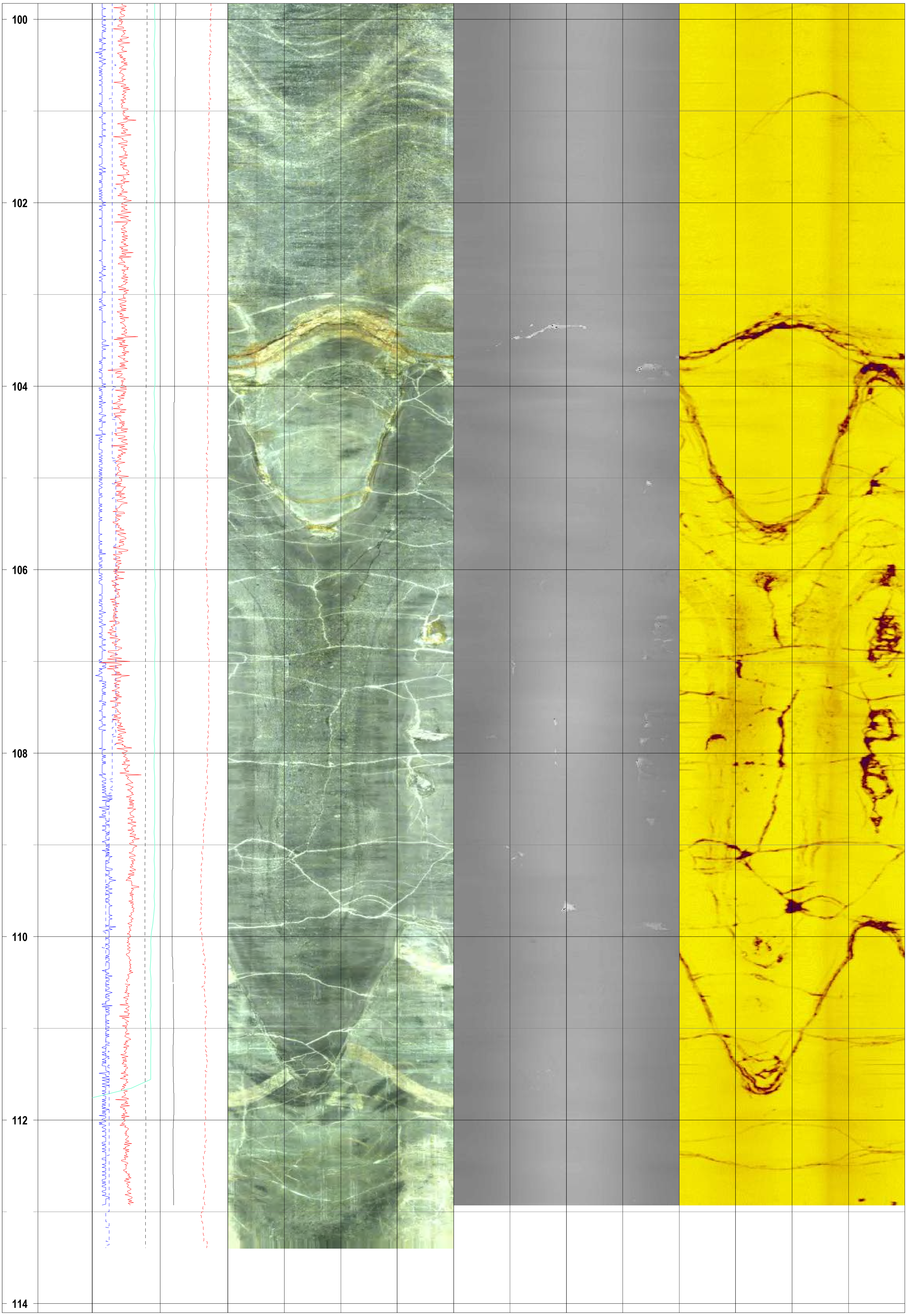
Haley & Aldrich / Concord, MA - HA20-CMT-4 conventional log plot



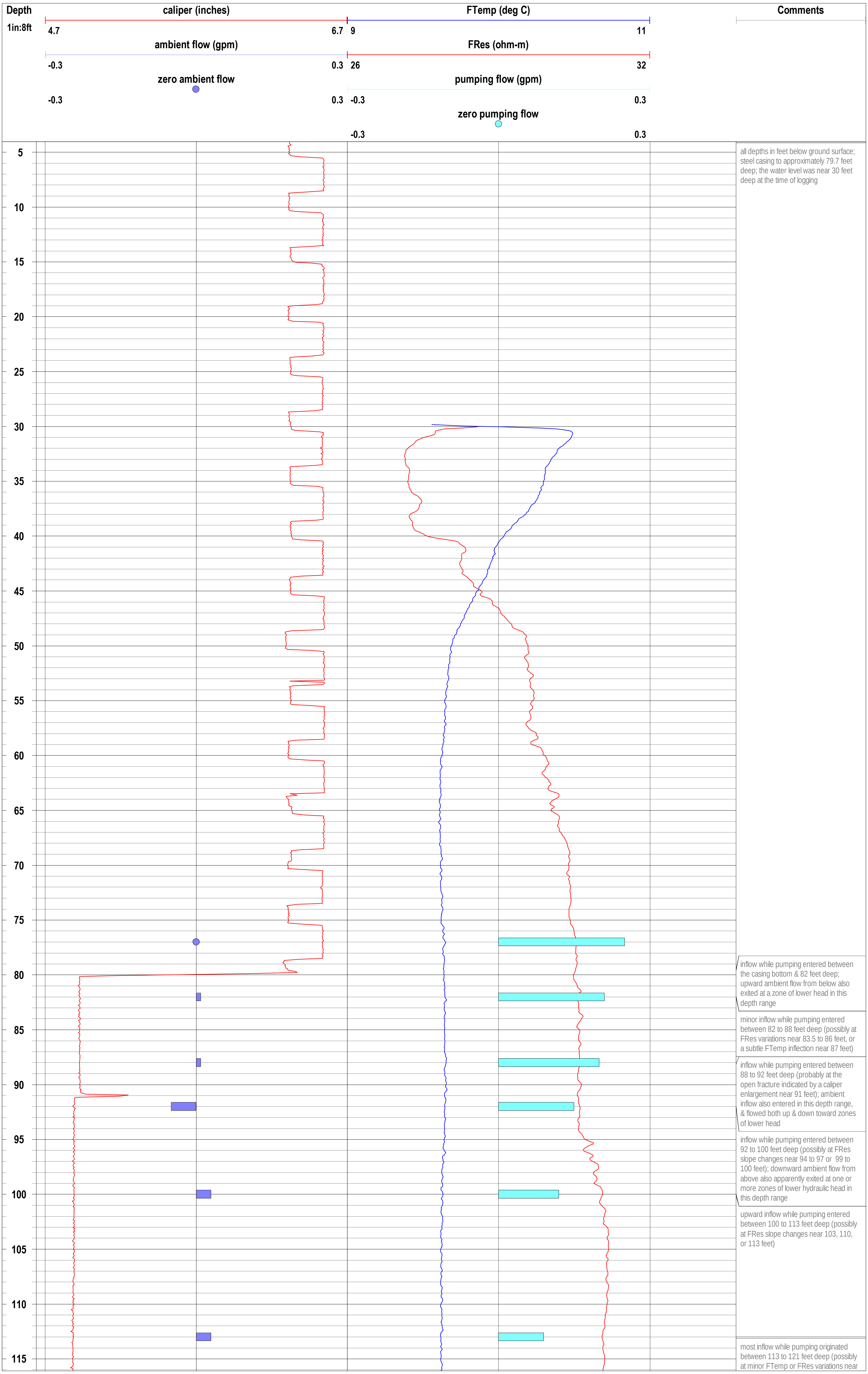
Haley & Aldrich / Concord, MA - HA20-CMT-4 optical & acoustic televiewer log plot

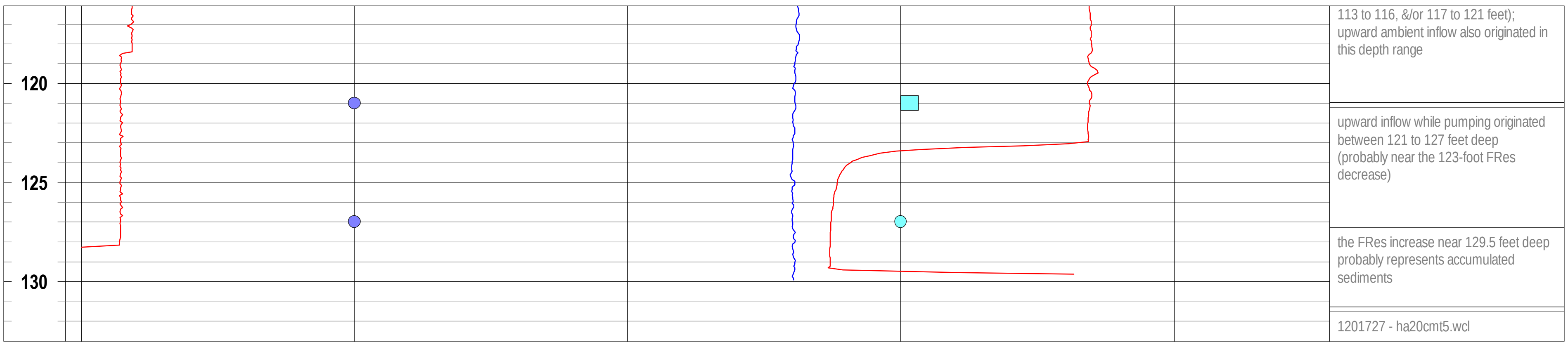
Depth	Tilt	OBI40 image	ABI40 traveltime	ABI40 amplitude
1in:1ft	0 deg 4	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°
	Magn.Field	upper OBI image (rotated by 254.0 deg)	upper ABI traveltime (rotated by -242.5 deg)	upper ABI amplitude (rotated by -242.5 deg)
	0 uT 90	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°
	Azimuth			
	0 deg 360			
	caliper (inches)			
	4 **6**			
	Tilt			
	0 deg 4			
	Mag.Field			
	0 uT 140			
	Azimuth			
	0 deg 360			




100
102
104
106
108
110
112
114

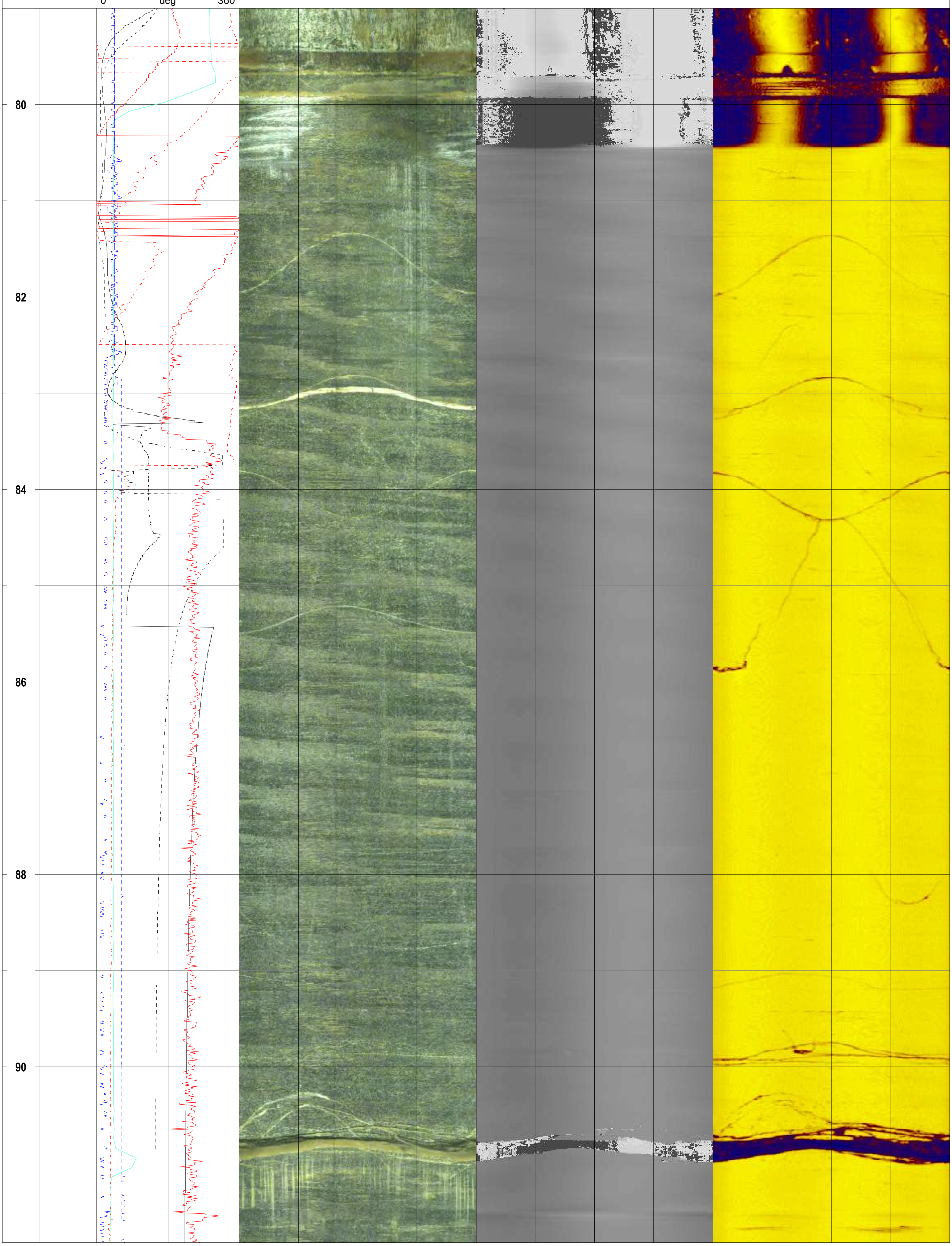
Haley & Aldrich / Concord, MA - HA20-CMT-5 conventional log plot

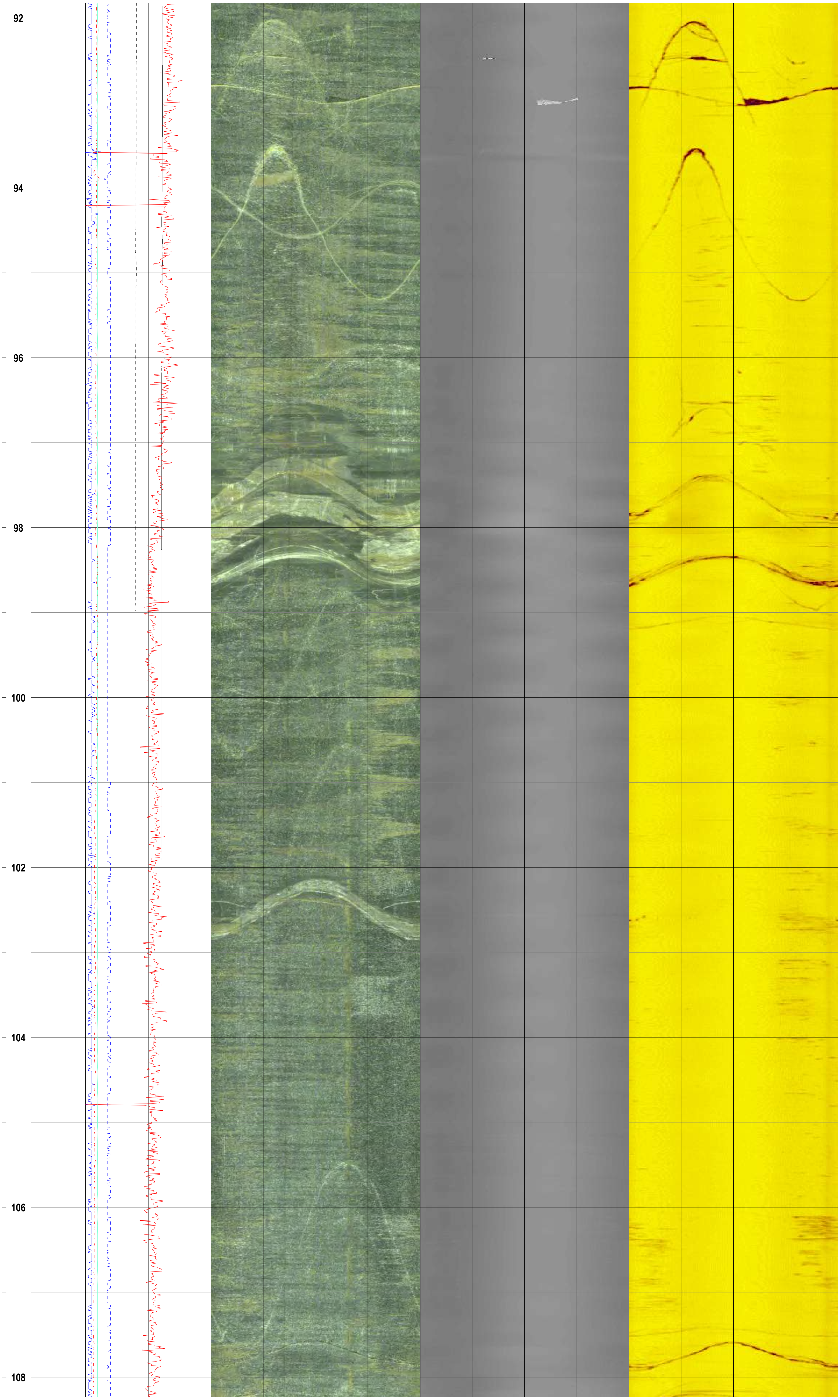


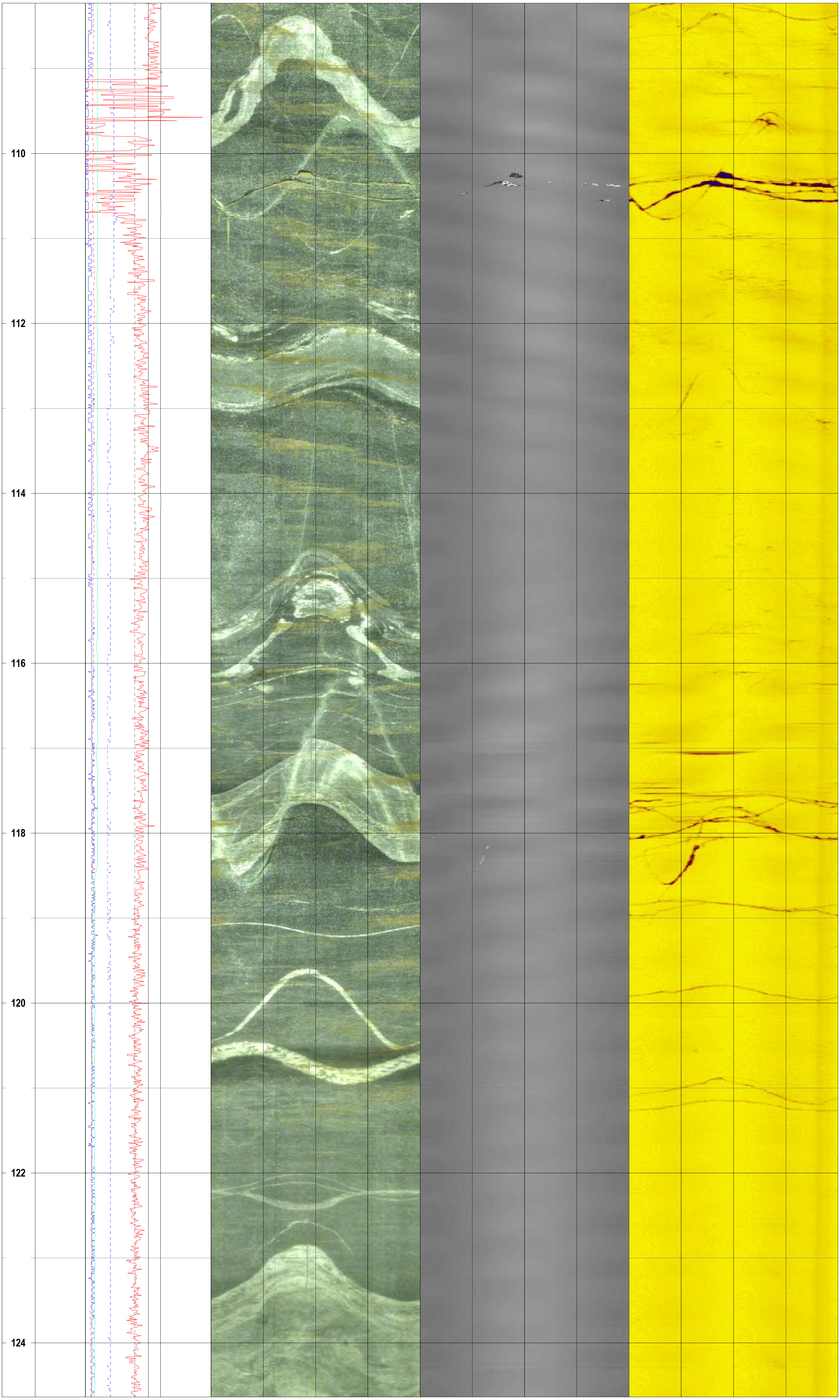

120
125
130
113 to 116, &/or 117 to 121 feet); upward ambient inflow also originated in this depth range
upward inflow while pumping originated between 121 to 127 feet deep (probably near the 123-foot FRes decrease)
the FRes increase near 129.5 feet deep probably represents accumulated sediments
1201727 - ha20cmt5.wcl

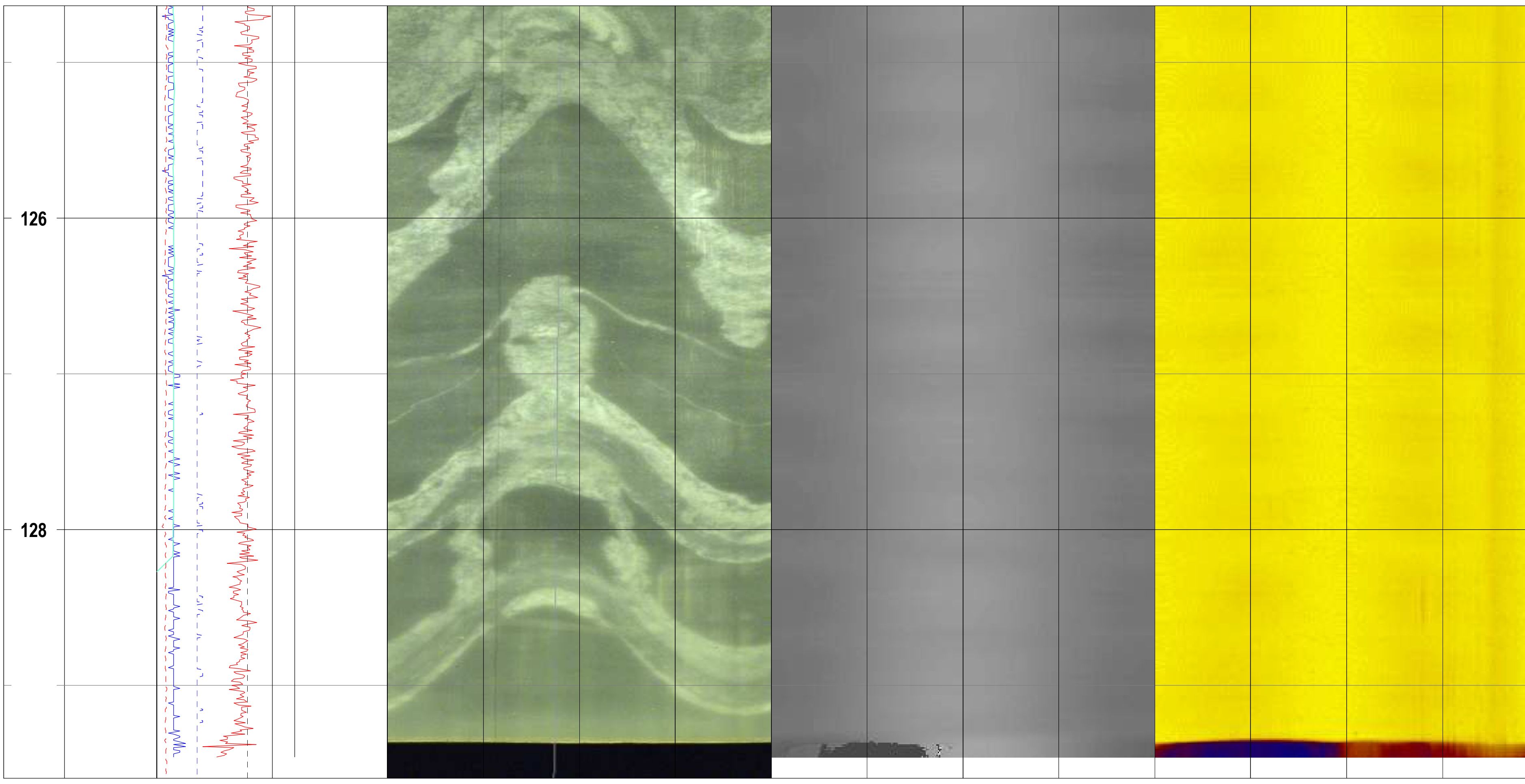
Haley & Aldrich / Concord, MA - HA20-CMT-5 optical & acoustic televiewer log plot

Depth	Tilt	OBI40 image	ABI40 traveltime	ABI40 amplitude
1in:1ft	0 deg 4	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°
	Magn.Field	upper OBI image (rotated by -202.0 deg)	upper ABI traveltime (rotated by 5.0 deg)	upper ABI amplitude (rotated by 5.0 deg)
	0 uT 90	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°
	Azimuth			
	0 deg 360			
	caliper (inches)			
	4.7 **6.7**			
	Tilt			
	0 deg 4			
	Mag.Field			
	0 uT 140			
	Azimuth			
	0 deg 360			

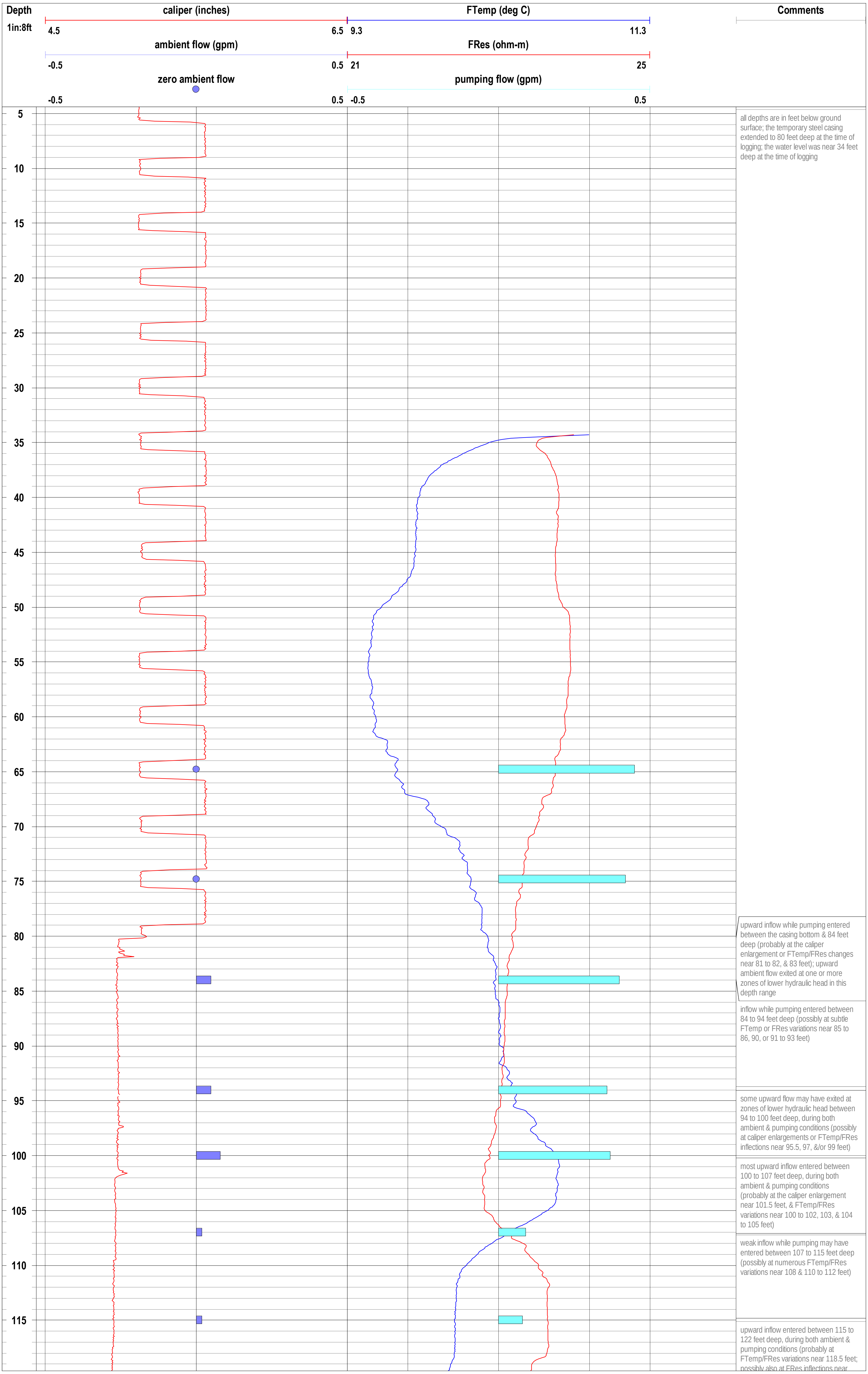


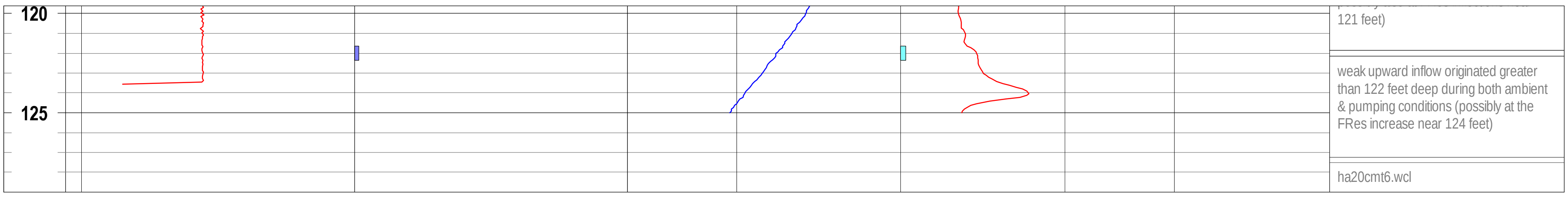

92
94
96
98
100
102
104
106
108


110
112
114
116
118
120
122
124

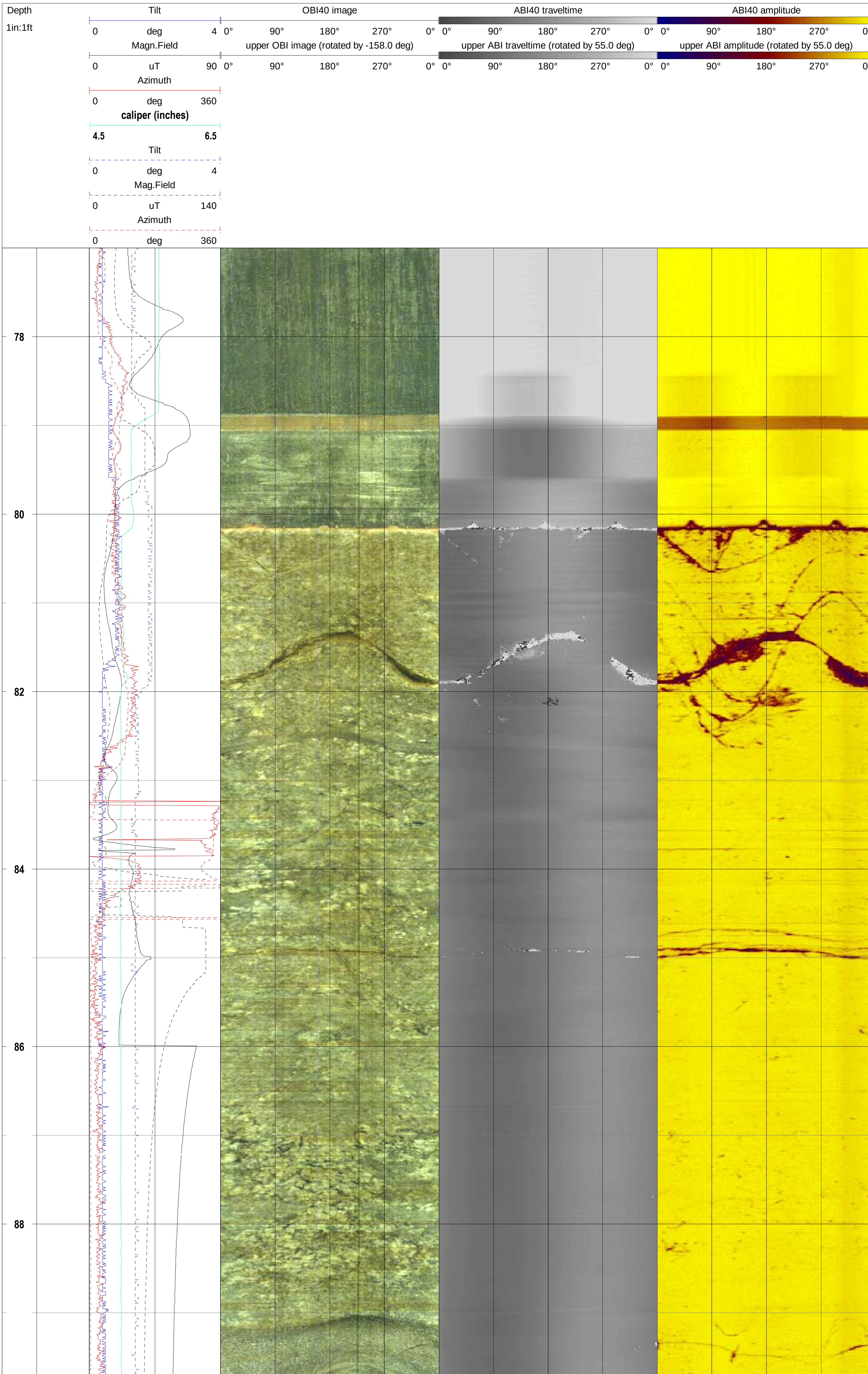

126
128

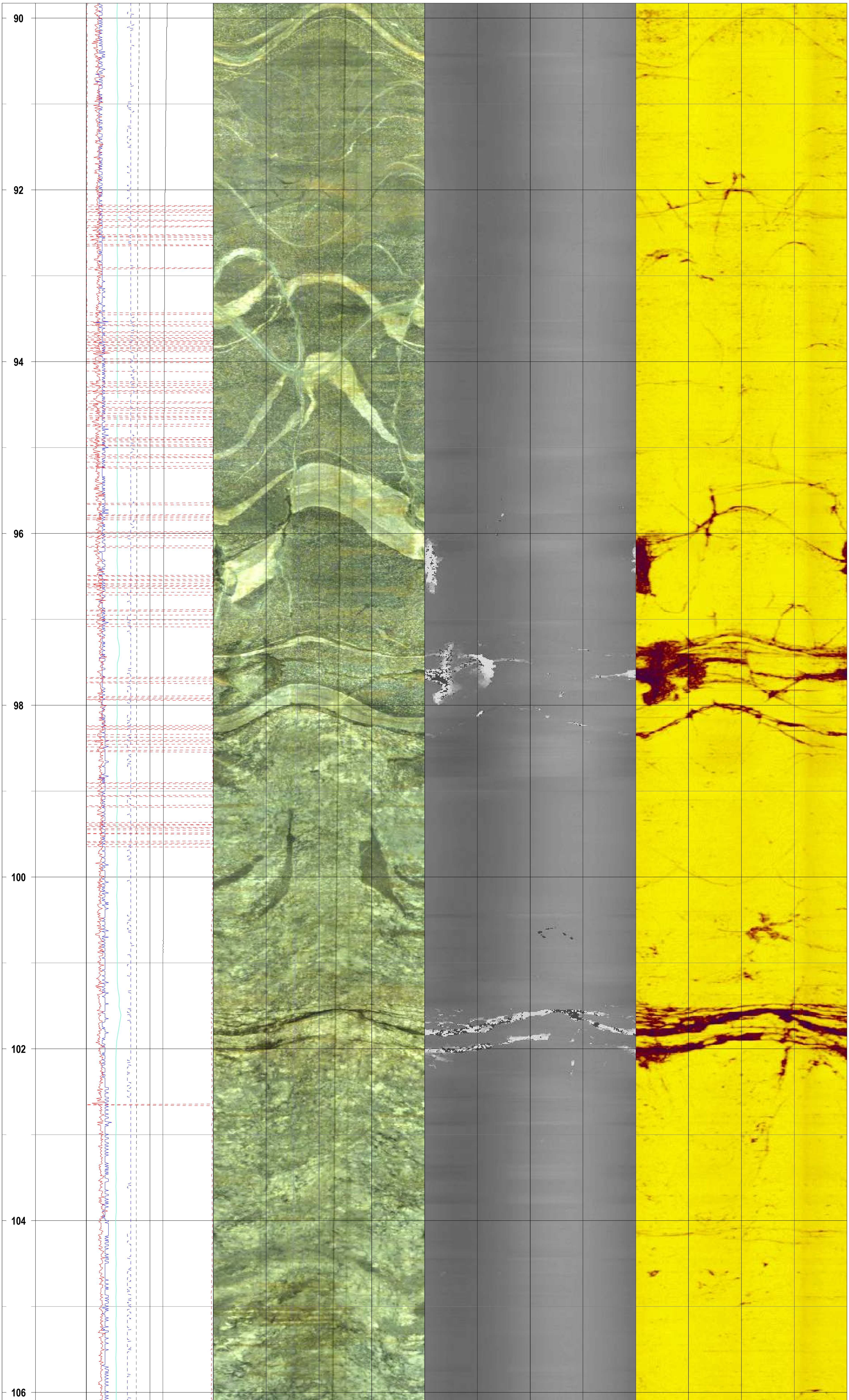
Haley & Aldrich / Concord, MA - HA20-CMT-6 conventional log plot

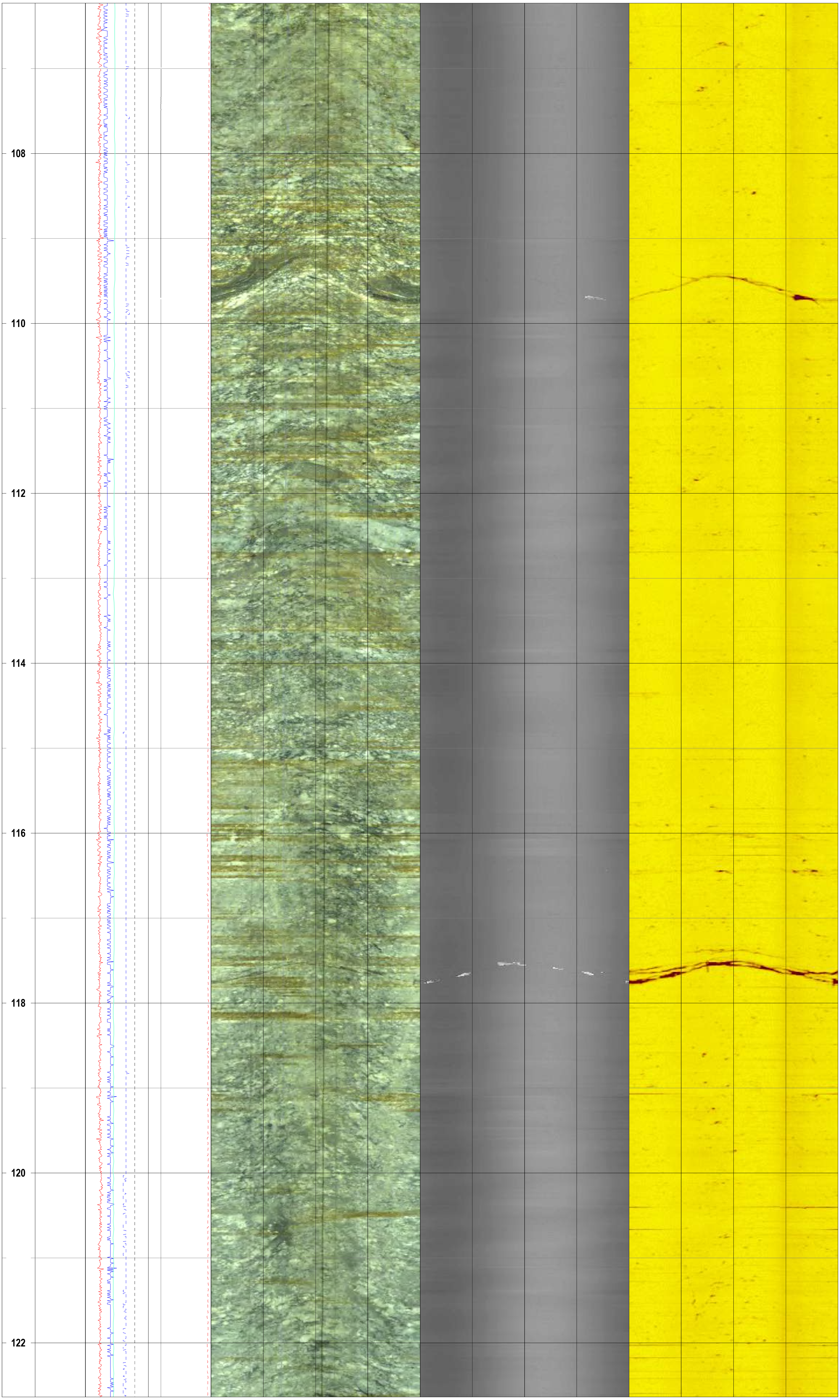


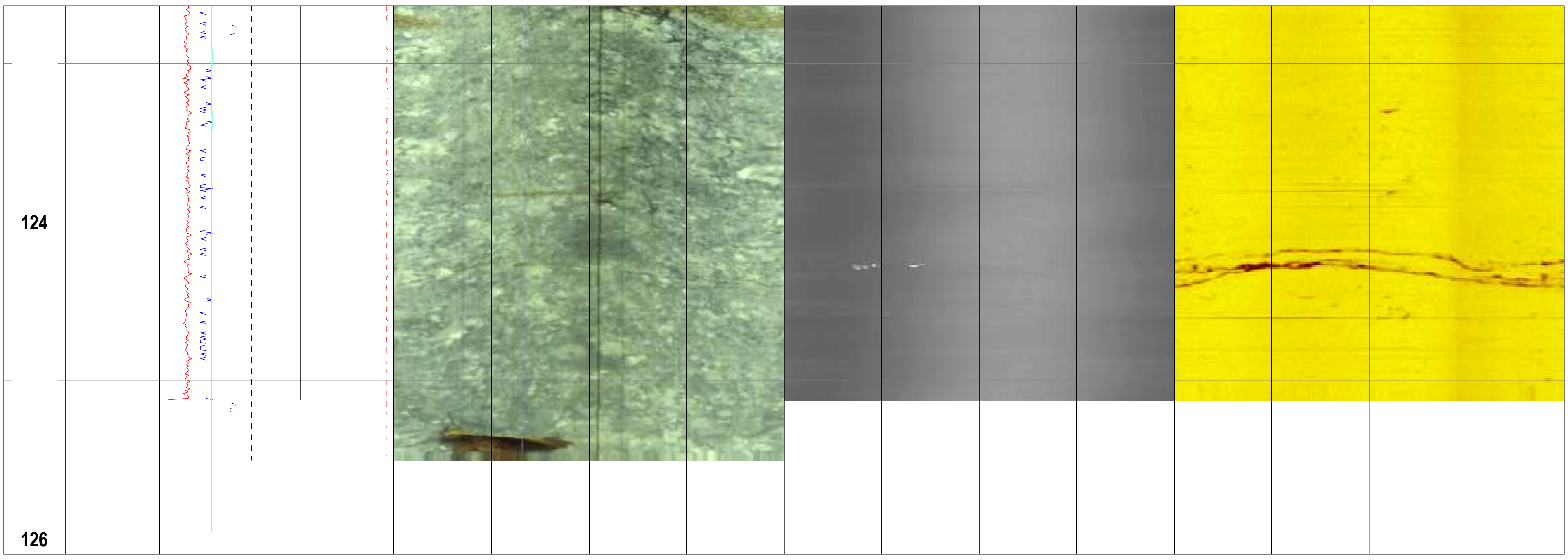

120
125
121 feet)
weak upward inflow originated greater than 122 feet deep during both ambient & pumping conditions (possibly at the FRes increase near 124 feet)
ha20cmt6.wcl

Haley & Aldrich / Concord, MA - HA20-CMT-6 optical & acoustic televiewer log plot



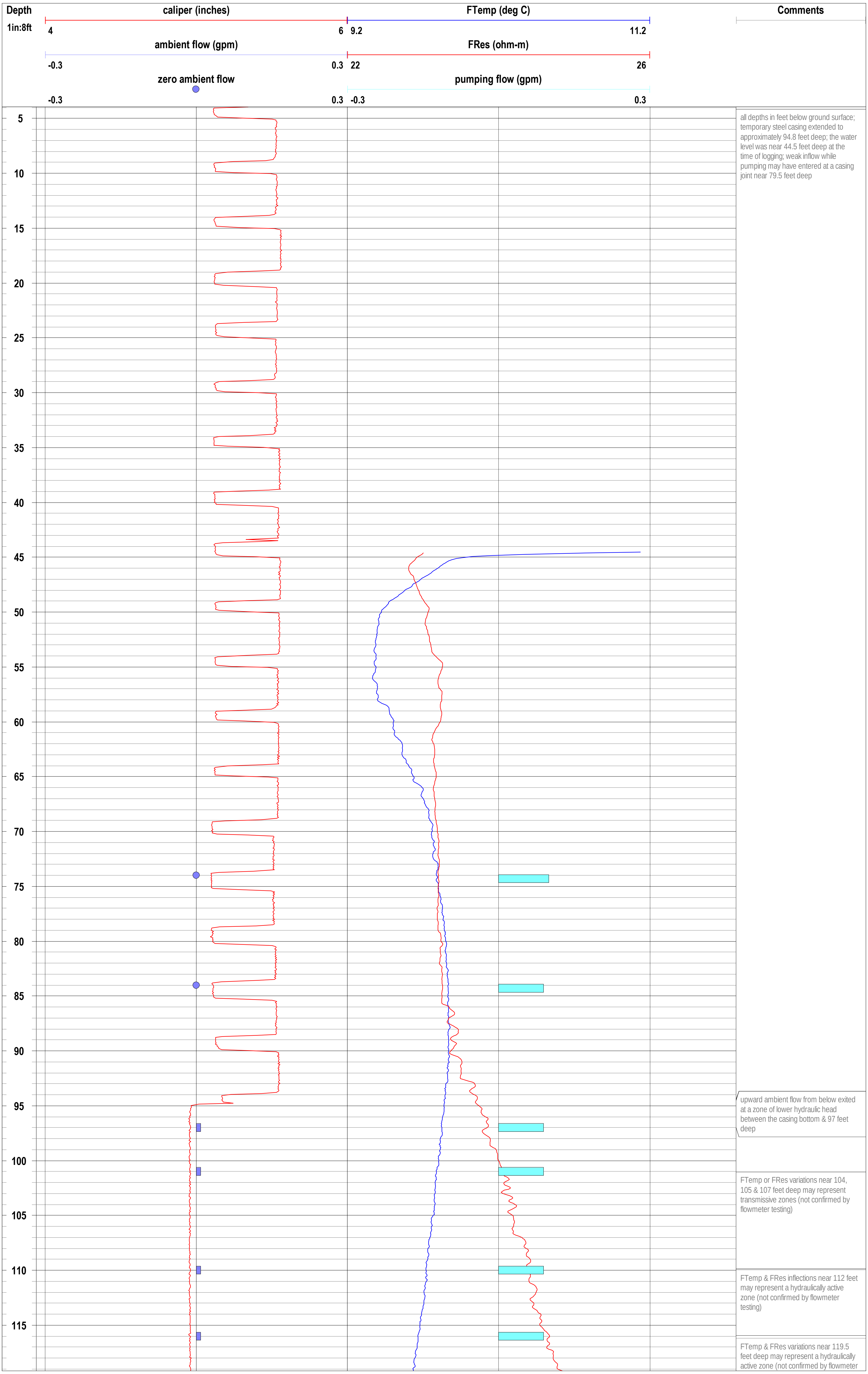

90
92
94
96
98
100
102
104
106

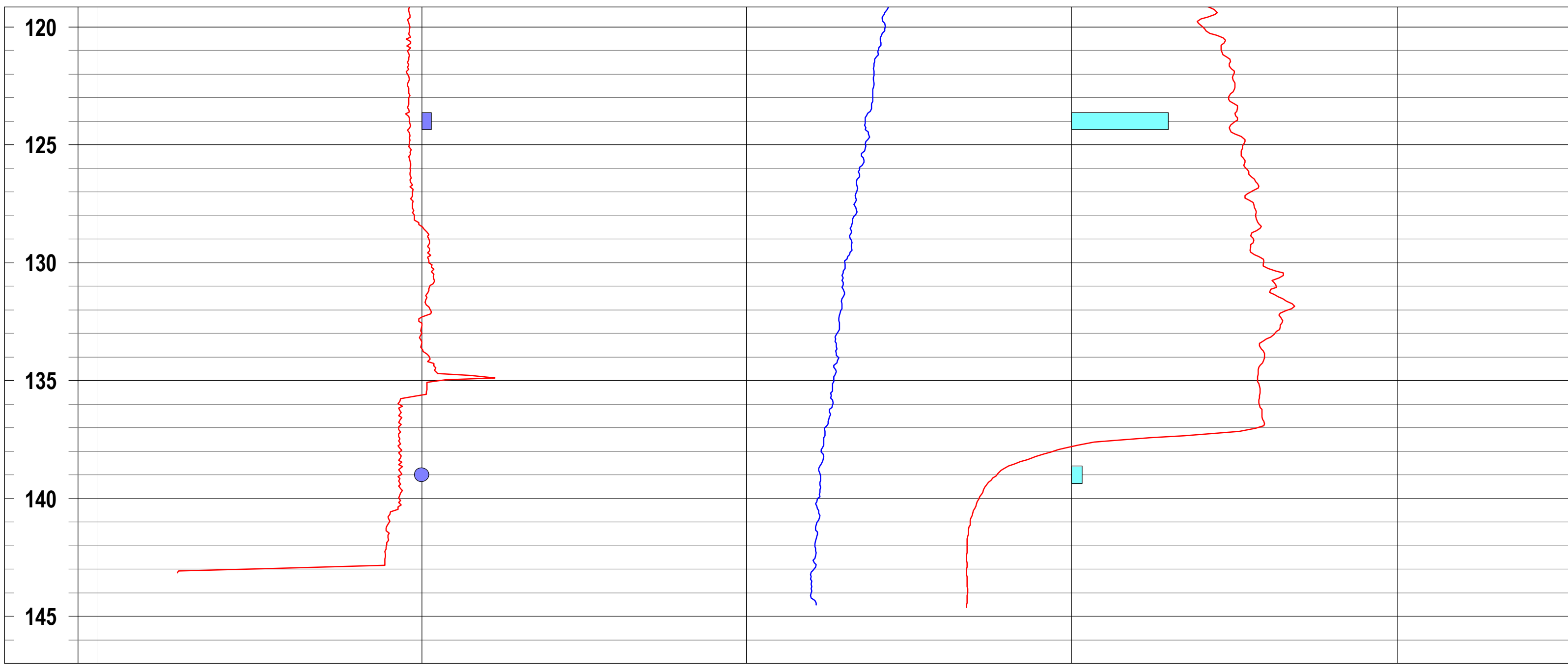

108
110
112
114
116
118
120
122



124
126

Haley & Aldrich / Concord, MA - HA20-GP-102A conventional log plot





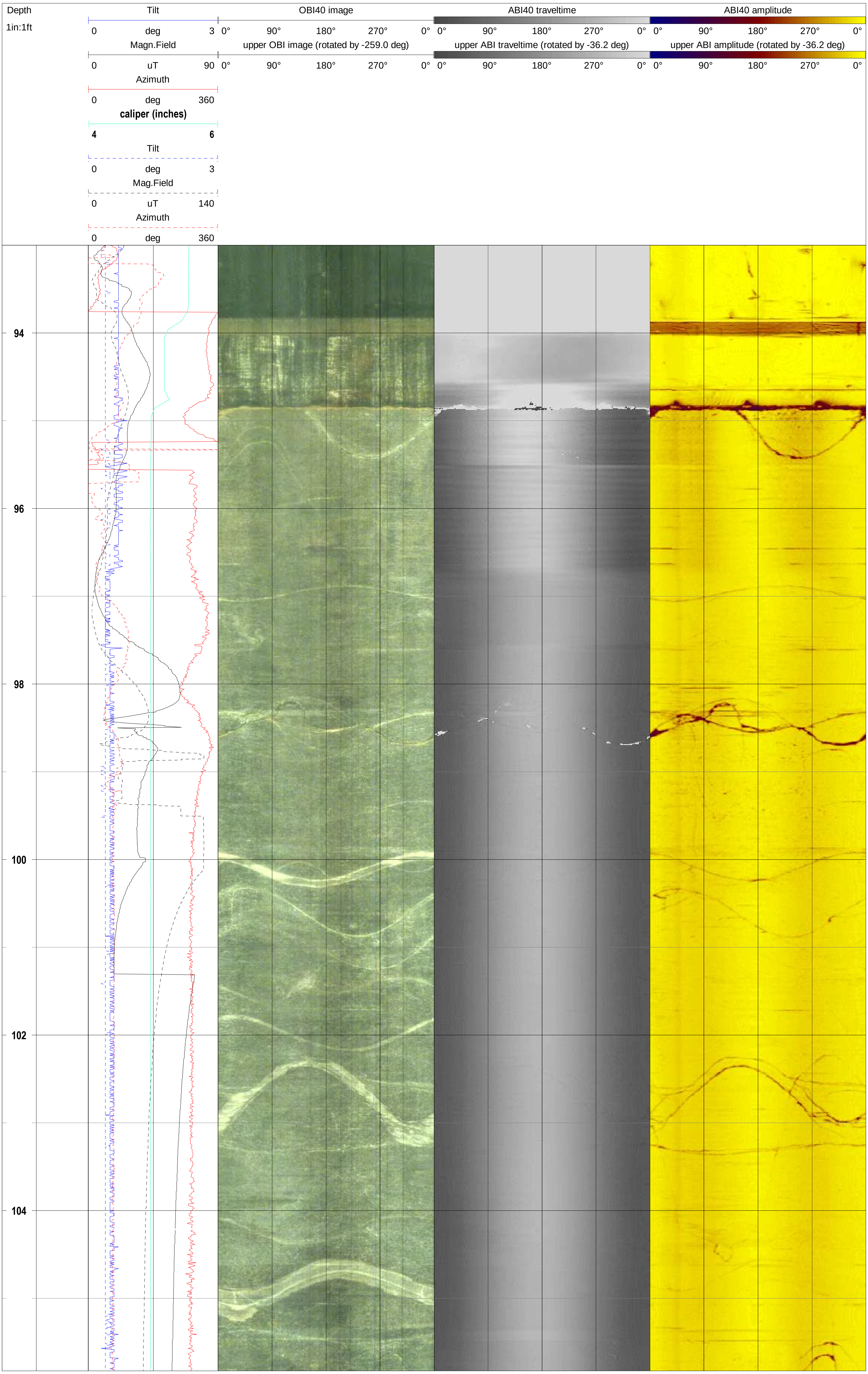
testing)

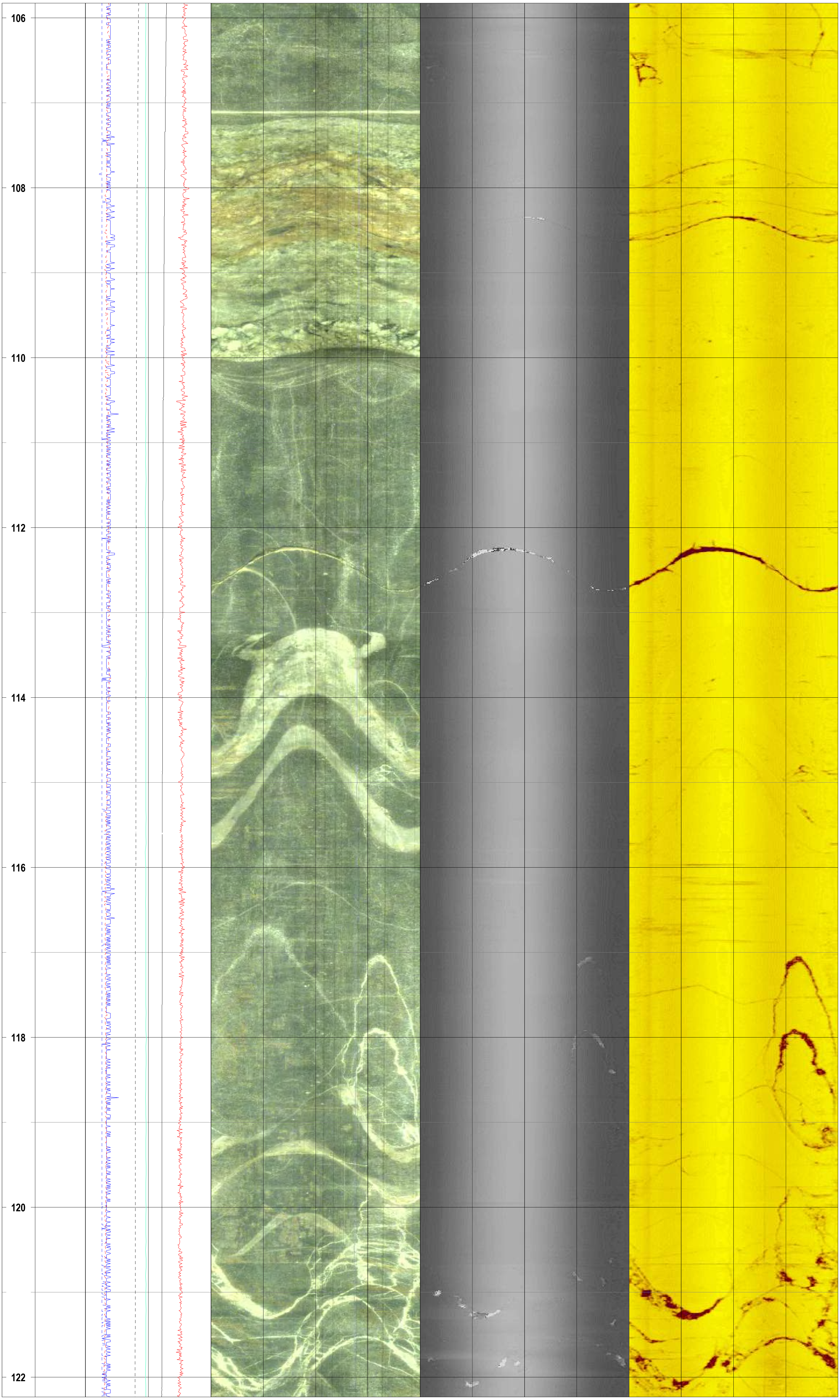
most inflow while pumping entered between 124 to 139 feet deep, probably at the caliper enlargement near 135 feet, and/or FTemp & FRes variations near 127, 129.5, 132 to 133, & 139 feet); upward ambient inflow also originated in this depth range

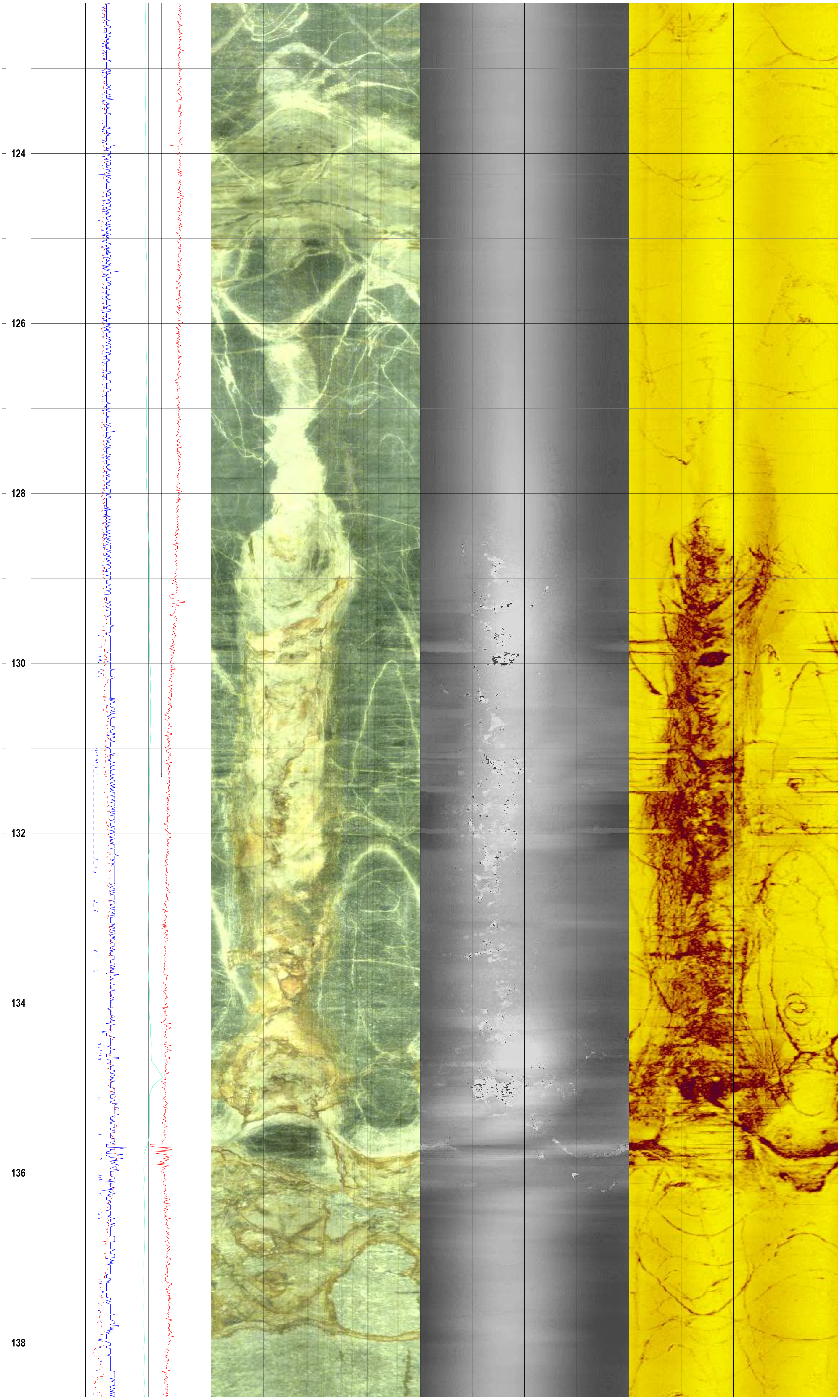
weak upward inflow while pumping originated greater than 139 feet deep

1201727 - ha20gp102a.wcl

Haley & Aldrich / Concord, MA - HA20-GP-102A optical & acoustic televiewer log plot




106
108
110
112
114
116
118
120
122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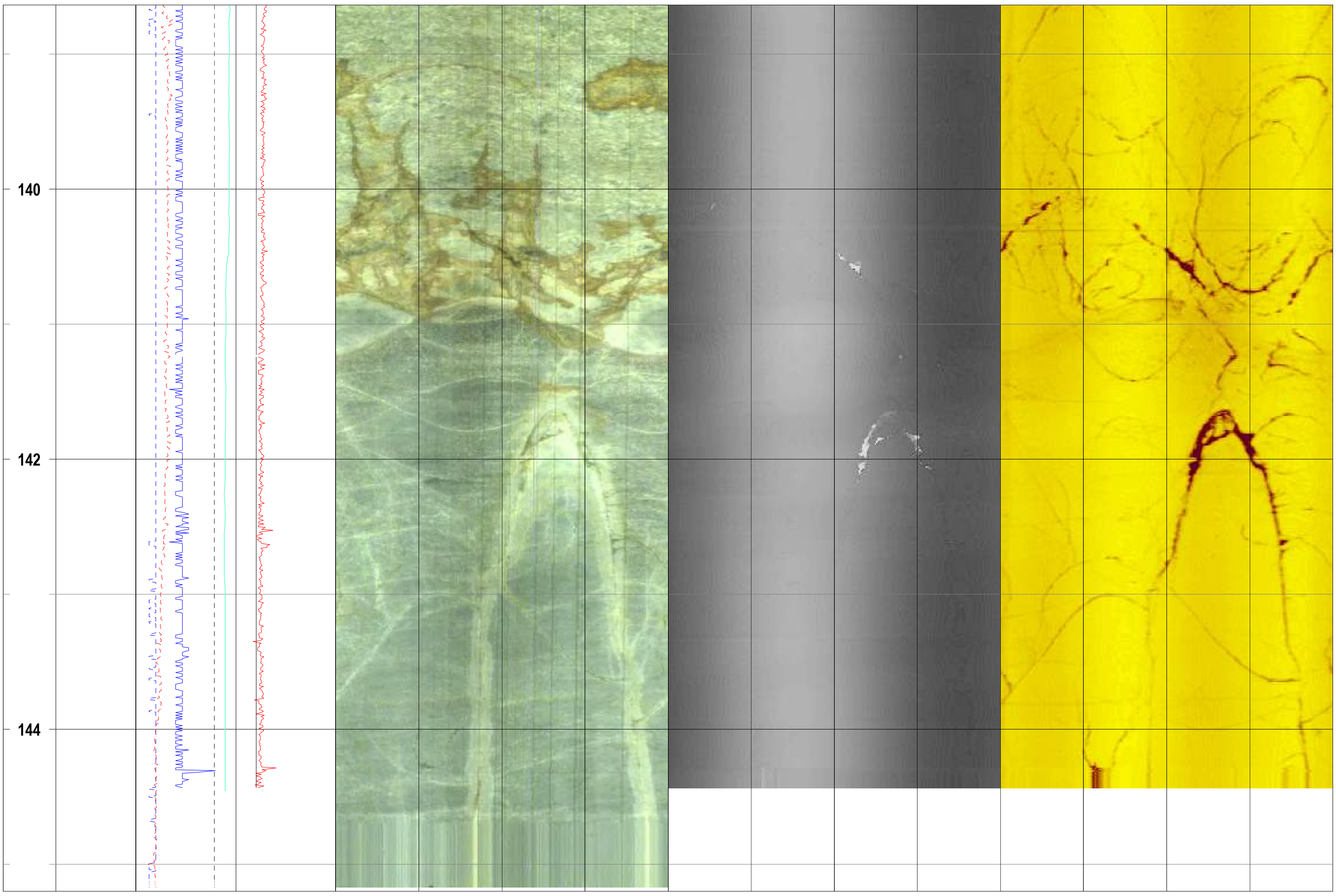
138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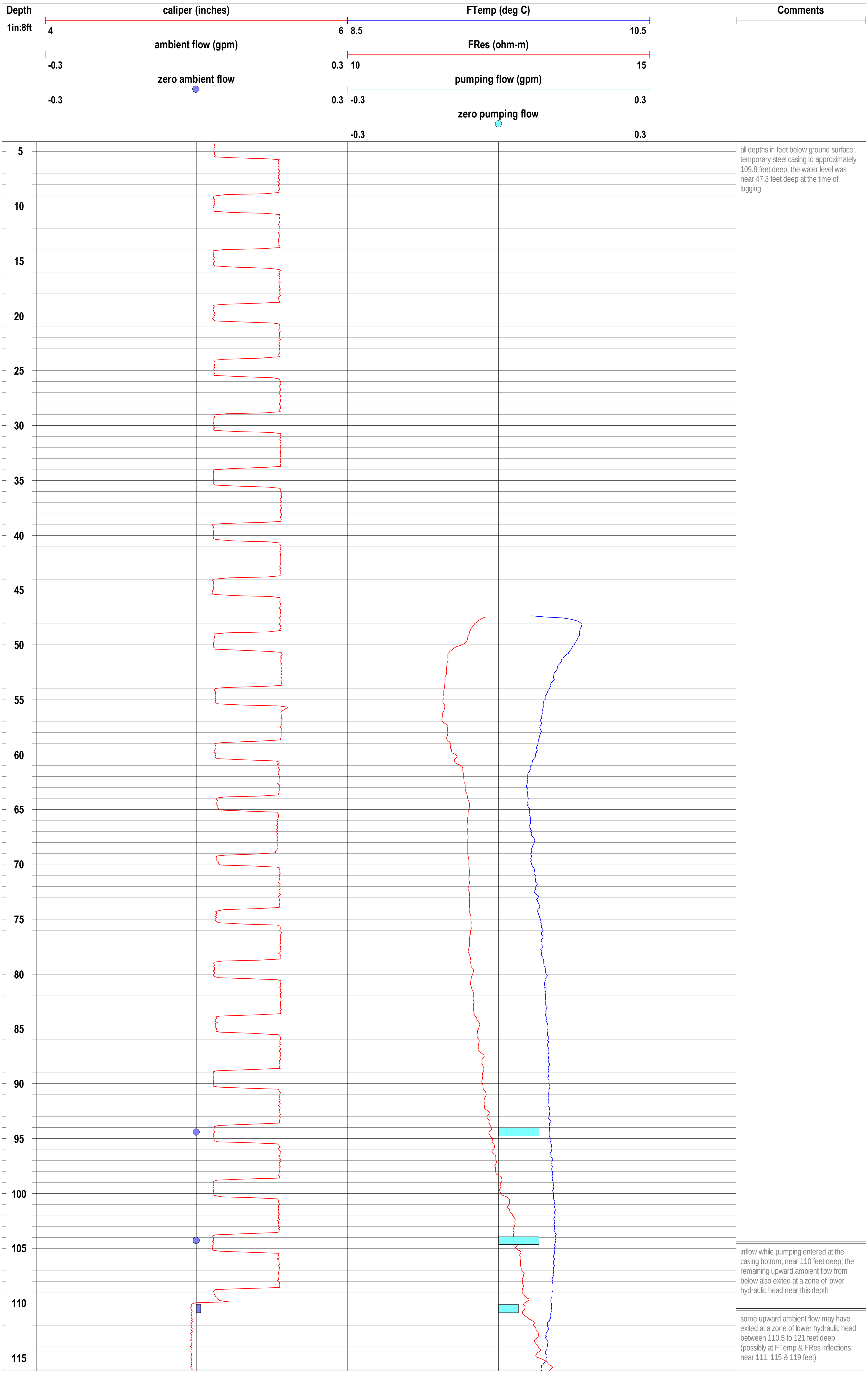
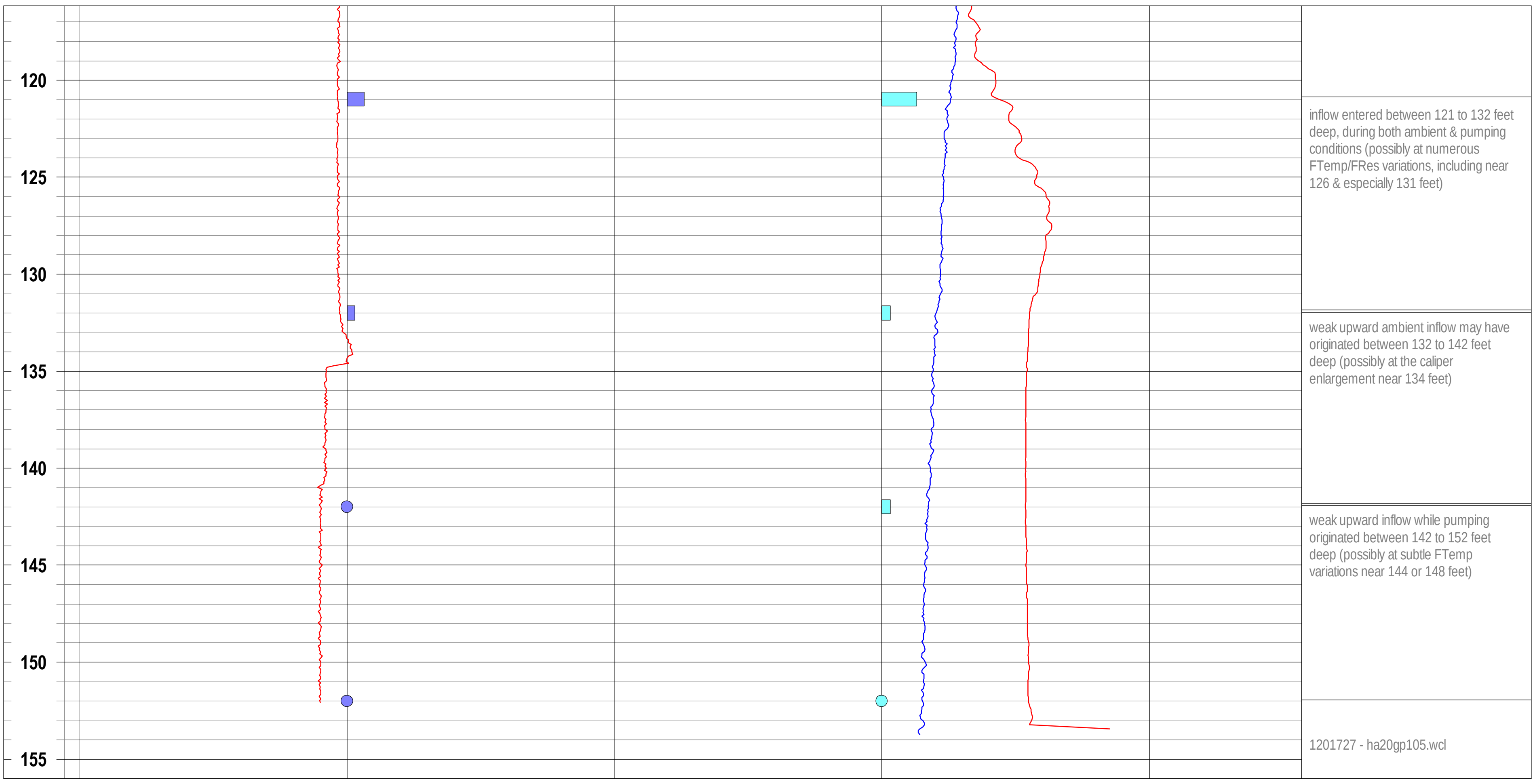
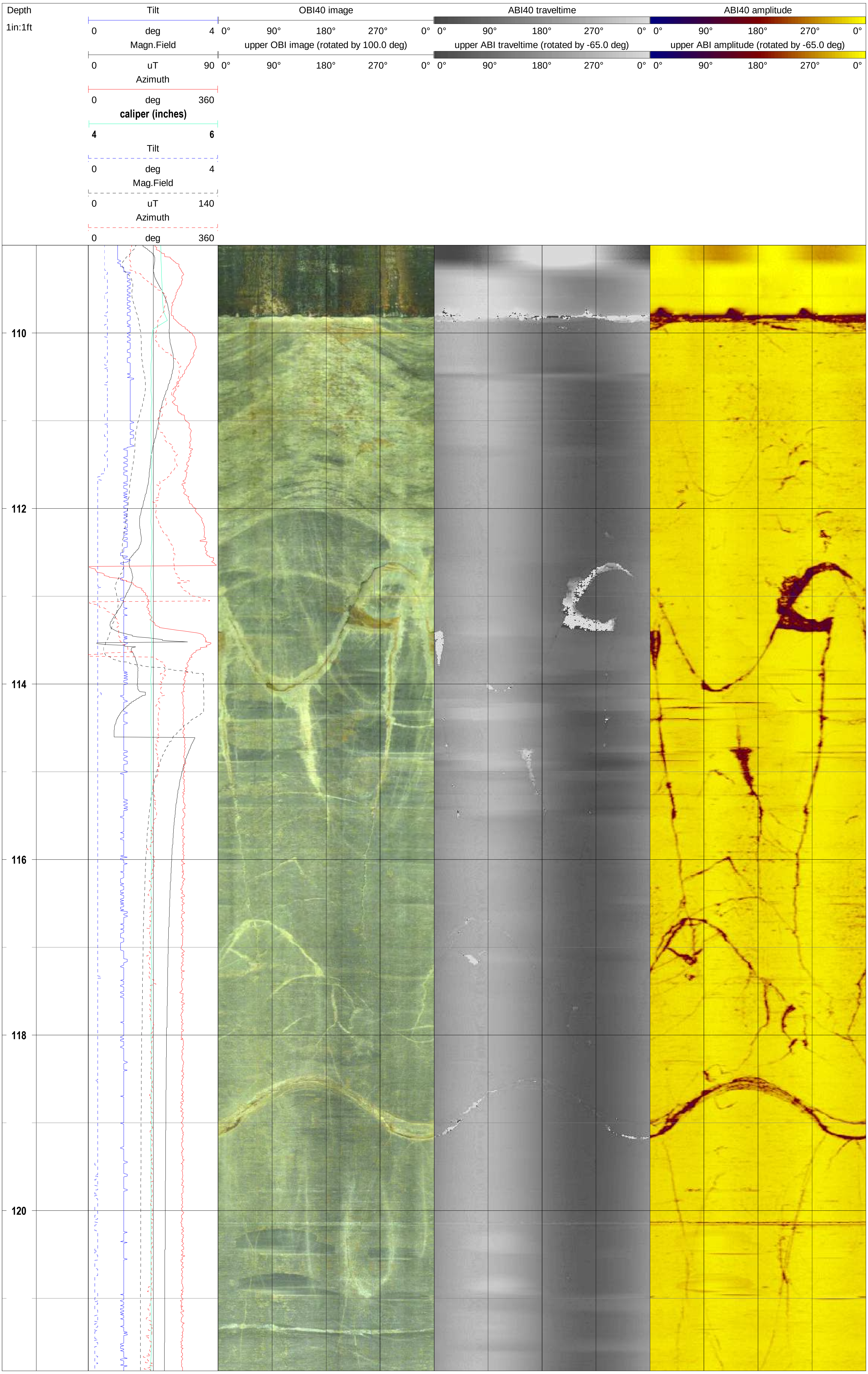
142
144

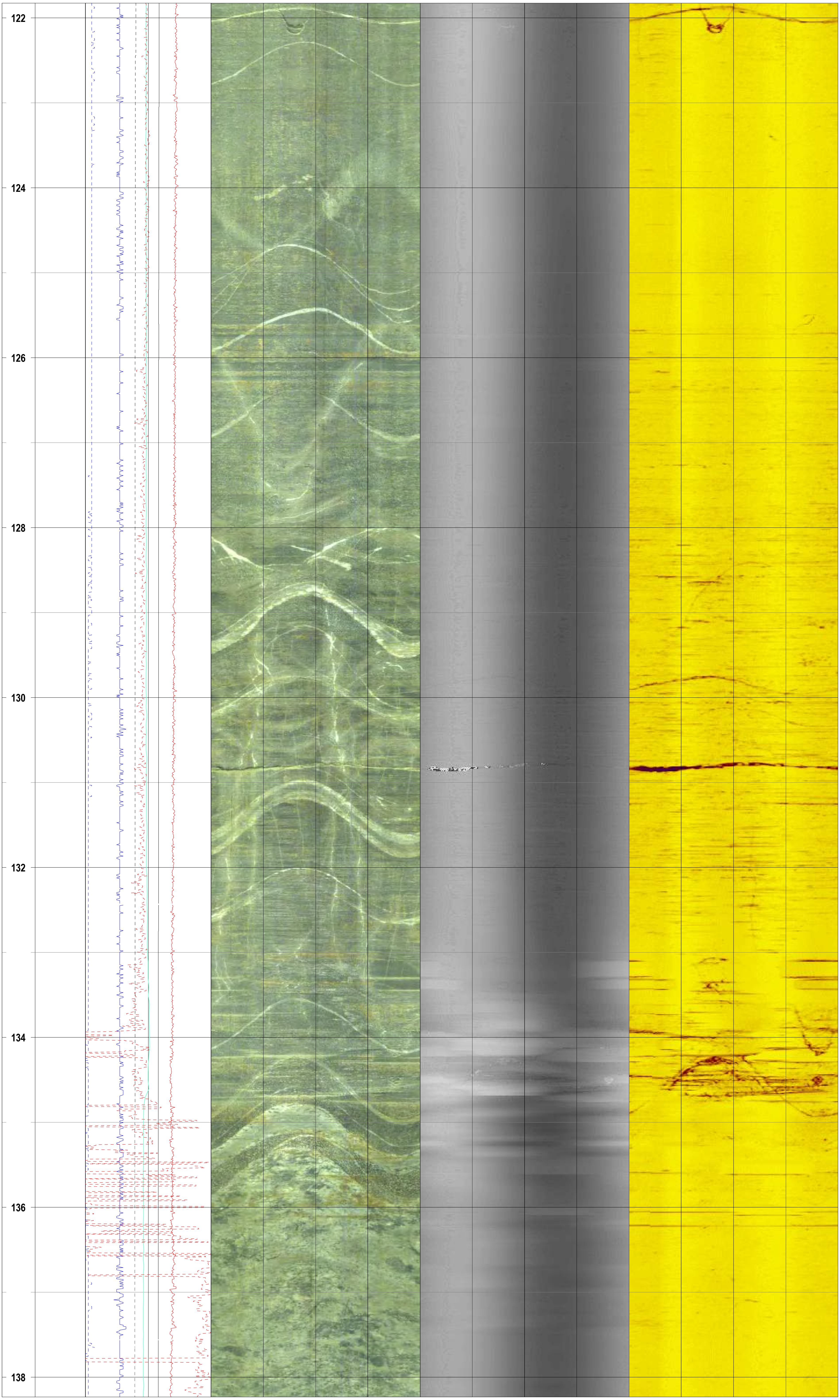
Haley & Aldrich / Concord, MA - HA20-GP-105 conventional log plot




120
125
130
135
140
145
150
155
inflow entered between 121 to 132 feet deep, during both ambient & pumping conditions (possibly at numerous FTemp/FRes variations, including near 126 & especially 131 feet)
weak upward ambient inflow may have originated between 132 to 142 feet deep (possibly at the caliper enlargement near 134 feet)
weak upward inflow while pumping originated between 142 to 152 feet deep (possibly at subtle FTemp variations near 144 or 148 feet)
1201727 - ha20gp105.wcl

Haley & Aldrich / Concord, MA - HA20-GP-105 acoustic & optical televiewer log plot

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124
126
128
130
132
134
136
138

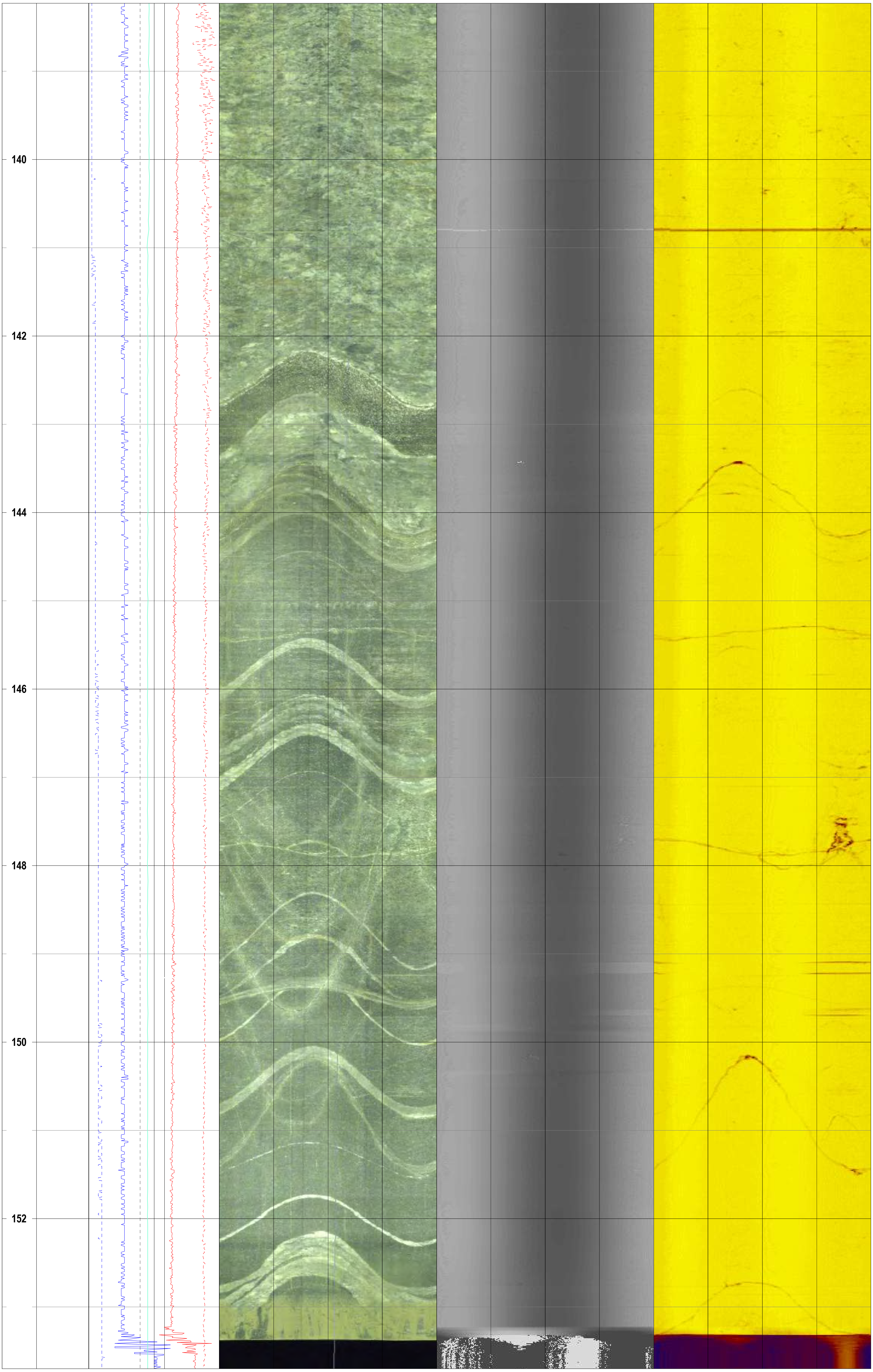

140
142
144
146
148
150
152

EXHIBIT HB1-3

Observation Well And CMT Well Installation Logs

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-1

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	06 Jan 2021
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985714.75 E 677779.6621
Driller	F. Gardella	Ground El.	177.1
		Datum	

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS	0			Grout to grade	
	5				
	10				
	15				
	20				
	25				

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-1

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	06 Jan 2021
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985714.75 E 677779.6621
Driller	F. Gardella	Ground El.	177.1
		Datum	

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued*...	30				
	35				
	40				
	45			Bentonite Pellets	bottom of grout 45.0 top of bentonite pellets 45.0
	50				
					bottom of bentonite pellets 52.0 top of sand 52.0
	55			Top of Screen 55.9 Channel 1 56.0-56.3 Bottom of Screen 56.5 Bentonite Pellets	

HALEY ALDRICH

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-1

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	F. Gardella

Well Diagram

- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No.	131884-004
Date Installed	06 Jan 2021
H&A Rep.	A. Midgley
Location	N 2985714.75 E 677779.6621
Ground El.	177.1
Datum	

Soil/Rock CONDITIONS	DEPTH (ft.)	Borehole Backfill	Installation Comments
GLACIAL TILL	60.0		bottom of sand 60.0 top of bentonite pellets 60.0
			bottom of bentonite pellets 63.0 top of sand 63.0
		Top of Screen 64.9 Channel 2 65.0-65.3 Bottom of Screen 65.4 Bentonite Pellets	
			bottom of sand 68.0 top of bentonite pellets 68.0
			bottom of bentonite pellets 70.7 top of sand 70.7
BEDROCK	72.0		
		Top of Screen 72.9 Channel 3 and 6 73.0-73.3 Bottom of Screen 73.4 Bentonite Pellets	
			bottom of sand 77.0 top of bentonite pellets 77.0
			bottom of bentonite pellets 83.0 top of sand 83.0
		Top of Screen 85.9 Channel 5 86.0-86.3 Bottom of Screen 86.4 Bentonite Pellets	
			bottom of sand 88.0 top of bentonite pellets 88.0

Depth scale: 60, 65, 70, 75, 80, 85

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-1

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	06 Jan 2021
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985714.75 E 677779.6621
Driller	F. Gardella	Ground El.	177.1
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
BEDROCK...*continued*...	90				bottom of bentonite pellets 91.0 top of sand 91.0
	95			Top of Screen 94.3 Channel 6 94.4-94.7 Bottom of Screen 94.8	bottom of sand 94.8

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-2

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	10 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985760.827 E 677653.9087
Driller	O. Gonzalez/F. Gardella	Ground El.	187.9
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
FILL	0			Grout to grade	
	5				
	10				
	15				
	20				
ICE CONTACT DEPOSITS	22.0				
	25				

HALEY ALDRICH

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-2

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	10 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985760.827 E 677653.9087
Driller	O. Gonzalez/F. Gardella	Ground El.	187.9
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued*...	30				
	35				
	40				
				Bentonite Pellets	bottom of grout 43.0
	45				
	50				
					top of bentonite pellets 53.0
	55				
					bottom of bentonite pellets 59.3 top of sand 59.3

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-2

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	O. Gonzalez/F. Gardella

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

File No.	131884-004
Date Installed	10 Dec 2020
H&A Rep.	A. Midgley
Location	N 2985760.827 E 677653.9087
Ground El.	187.9
Datum	

Soil/Rock CONDITIONS	DEPTH (ft.)	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued*...	60		
		Top of Screen 61.4 Channel 4 and 1 61.5-61.8 Bottom of Screen 61.9 Bentonite Pellets	
			bottom of sand 63.9 top of bentonite pellets 63.9
	65		
GLACIAL TILL	66.0		
	70		
	75		
	80		
			bottom of bentonite pellets 83.4 top of sand 83.4
TOP OF ROCK 85.5 FT	85		bottom of sand 85.0 top of bentonite pellets 85.0
BEDROCK	85.5	Top of Screen 85.4 Channel 5 and 2 85.5-85.8 Bottom of Screen 85.9 Bentonite Pellets	
			bottom of bentonite pellets 89.4 top of sand 89.4

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	10 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985760.827 E 677653.9087
Driller	O. Gonzalez/F. Gardella	Ground El.	187.9
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
BEDROCK...*continued...*	90			Top of Screen 91.4 Channel 3 91.5-91.8 Bottom of Screen 91.9 Bentonite Pellets	bottom of sand 93.9 top of bentonite pellets 93.9
	95				
	100				
	105				
	110				
	115				

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-2

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	10 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985760.827 E 677653.9087
Driller	O. Gonzalez/F. Gardella	Ground El.	187.9
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
BEDROCK...*continued*...	120				bottom of bentonite pellets 120.9 top of sand 120.9
				Top of Screen 122.9 Channel 6 123.0-123.3 Bottom of Screen 123.4 Bentonite Pellets	
	125				bottom of sand 125.4 top of bentonite pellets 125.4
	130				bottom of bentonite pellets 133.4 top of sand 133.4
	135			Top of Screen 135.4 Channel 7 Bottom of Screen 135.6	bottom of sand 135.6
BOTTOM OF EXPLORATION 135.6 FT	135.6				

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-3

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	O. Gonzalez

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

File No.	131884-004
Date Installed	10 Dec 2020
H&A Rep.	A. Midgley
Location	N 2985853.904 E 677666.3042
Ground El.	181.6
Datum	

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
FILL	0			Grout to grade	
ICE CONTACT DEPOSITS	14.0				

Depth scale: 0, 5, 10, 15, 20, 25

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-3

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	10 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985853.904 E 677666.3042
Driller	O. Gonzalez	Ground El.	181.6
		Datum	

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued*...	30				
	35				
	40				
	45			Bentonite Pellets	bottom of grout 45.0 top of bentonite pellets 45.0
	50				
	55				bottom of bentonite pellets 55.9 top of sand 55.9
				Top of Screen 57.9 Channel 1 58.0-58.3 Bottom of Screen 58.4 Bentonite Pellets	

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	10 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985853.904 E 677666.3042
Driller	O. Gonzalez	Ground El.	181.6
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued...*	60				bottom of sand 60.9 top of bentonite pellets 60.9
	65				
FLOW TILL	70.0				
	75				
GLACIAL TILL	76.0				
	80				bottom of bentonite pellets 82.5 top of sand 82.5
	85			Top of Screen 84.9 Channel 2 85.0-85.3 Bottom of Screen 85.4 Bentonite Pellets	bottom of sand 87.5 top of bentonite pellets 87.5

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-3

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	O. Gonzalez

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

File No.	131884-004
Date Installed	10 Dec 2020
H&A Rep.	A. Midgley
Location	N 2985853.904 E 677666.3042
Ground El.	181.6
Datum	

Soil/Rock CONDITIONS	DEPTH (ft.)	Borehole Backfill	Installation Comments
GLACIAL TILL...*continued...*	90		
TOP OF ROCK 76.5 FT	95		
BEDROCK	96.5		
	100		bottom of bentonite pellets 99.9 top of sand 99.9
		Top of Screen 101.9 Channel 3 and 6 102.0-102.3 Bottom of Screen 102.4 Bentonite Pellets	
	105		bottom of sand 104.4 top of bentonite pellets 104.4
	110		bottom of bentonite pellets 111.9 top of sand 111.9
		Top of Screen 112.9 Channel 4 113.0-113.3 Bottom of Screen 113.4 Bentonite Pellets	
	115		bottom of sand 116.4 top of bentonite pellets 116.4

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	10 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985853.904 E 677666.3042
Driller	O. Gonzalez	Ground El.	181.6
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
BEDROCK...continued...	120				
					bottom of bentonite pellets 121.9 top of sand 121.9
				Top of Screen 123.9 Channel 5 124.0-124.3 Bottom of Screen 124.4	
	125			Bentonite Pellets	
					bottom of sand 126.4 top of bentonite pellets 126.4
	130				
	135				
	140				
					bottom of bentonite pellets 142.3 top of sand 142.3
	145			Top of Screen 145.4 Channel 7 145.5-145.7 Bottom of Screen 145.7	bottom of sand 145.7

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-4

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	F. Gardella

Well Diagram

- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No.	131884-004
Date Installed	13 Jan 2021
H&A Rep.	A. Midgley
Location	N 2985929.262 E 677779.7947
Ground El.	173.9
Datum	

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS	0			Grout to grade	
	5				
	10				
	15				
	20				
	25				

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-4

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	13 Jan 2021
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985929.262 E 677779.7947
Driller	F. Gardella	Ground El.	173.9
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued*...	30				
	35				
	40				
	45				
				Bentonite Pellets	bottom of grout 46.0 top of bentonite pellets 46.0
	50				
	55				
					bottom of bentonite pellets 58.0 top of sand 58.0

HALEY ALDRICH

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-4

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	F. Gardella

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

File No.	131884-004
Date Installed	13 Jan 2021
H&A Rep.	A. Midgley
Location	N 2985929.262 E 677779.7947
Ground El.	173.9
Datum	

Soil/Rock CONDITIONS	DEPTH (ft.)	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued...*	60		
		Top of Screen 61.9 Channel 1 62.0-62.3 Bottom of Screen 62.4 Bentonite Pellets	
	65		
			bottom of sand 67.0 top of bentonite pellets 67.0
	70		
GLACIAL TILL	74.0		
	75		bottom of bentonite pellets 75.0 top of sand 75.0
		Top of Screen 78.9 Channel 2 79.0-79.3 Bottom of Screen 79.4 Bentonite Pellets	
	80		
			bottom of sand 84.0 top of bentonite pellets 84.0
	85		
TOP OF ROCK 88.0 FT			
BEDROCK	88.0		bottom of bentonite pellets 88.0 top of sand 88.0

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-4

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	F. Gardella

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No.	131884-004
Date Installed	13 Jan 2021
H&A Rep.	A. Midgley
Location	N 2985929.262 E 677779.7947
Ground El.	173.9
Datum	

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
BEDROCK...*continued*...	90				
				Top of Screen 90.9 Channel 3 and 6 91.0-91.3 Bottom of Screen 91.4 Bentonite Pellets	
	95				bottom of sand 95.0 top of bentonite pellets 95.0
	100				bottom of bentonite pellets 100.0 top of sand0100.0
				Top of Screen 102.9 Channel 4 103.0-103.3 Bottom of Screen 103.4 Bentonite Pellets	
	105				bottom of sand 106.0 top of bentonite pellets0106.0
					bottom of bentonite pellets 109.0 top of sand
	110				
				Top of Screen 110.9 Channel 5 111.0-111.3 Bottom of Screen 111.4 Bentonite Pellets Top of Screen 113.0 Channel 7 Bottom of Screen 113.2	

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-5

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	15 Jan 2021
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985880.983 E 677820.574
Driller	O. Gonzalez	Ground El.	173.5
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
FILL	0			Grout to grade	
ICE CONTACT DEPOSITS	2.0				
	5				
	10				
	15				
	20				
	25				

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	15 Jan 2021
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985880.983 E 677820.574
Driller	O. Gonzalez	Ground El.	173.5
		Datum	

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued*...	30				
	35			Bentonite Pellets	bottom of grout 35.0 top of bentonite pellets35.0
	40				bottom of bentonite pellets 40.0 top of sand 40.0
	45			Top of Screen 44.9 Channel 1 45.0-45.3 Bottom of Screen 45.4 Bentonite Pellets	
	50				bottom of sand 50.0 top of bentonite pellets 50.0
	55				

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-5

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	15 Jan 2021
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985880.983 E 677820.574
Driller	O. Gonzalez	Ground El.	173.5
		Datum	

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	Well Details / Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued...*	60		bottom of bentonite pellets 60.0 top of sand 60.0
	65	Top of Screen 64.9 Channel 2 65.0-65.3 Bottom of Screen 65.4 Bentonite Pellets	
			bottom of sand 68.0 top of bentonite pellets 68.0
FLOW TILL	70.0		bottom of bentonite pellets70.6 top of sand 70.6
		Top of Screen 72.9 Channel 3 73.0-73.3 Bottom of Screen 73.4 Bentonite Pellets	
	75		
GLACIAL TILL TOP OF ROCK 77.8 FT	76.0		bottom of sand 76.0 top of bentonite pellets 76.0
BEDROCK	77.8		bottom of bentonite pellets 79.0 top of sand 79.0
	80	Top of Screen 81.9 Channel 4 82.0-82.3 Bottom of Screen 82.5 Bentonite Pellets	
	85		bottom of sand 86.0 top of bentonite pellets 86.0
			bottom of bentonite pellets 89.0 top of sand 89.0

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-5

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	15 Jan 2021
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985880.983 E 677820.574
Driller	O. Gonzalez	Ground El.	173.5
		Datum	

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
BEDROCK...*continued*...	90				
				Top of Screen 91.9 Channel 5 92.0-92.3 Bottom of Screen 92.4 Bentonite Pellets	
	95				
					bottom of sand 97.0 top of bentonite pellets 97.0
	100				
	105				
	110				
					bottom of bentonite pellets 113.0 top of sand 113.0
	115				
				Top of Screen 116.9 Channel 6 117.0-117.3 Bottom of Screen 117.4 Bentonite Pellets	

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-5

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	15 Jan 2021
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985880.983 E 677820.574
Driller	O. Gonzalez	Ground El.	173.5
		Datum	

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
BEDROCK...*continued*...	120				
					bottom of sand 122.0 top of bentonite pellets 122.0
	125				bottom of bentonite pellets 125.0 top of sand 125.0
				Top of Screen 129.4 Channel 7 129.4-129.6 Bottom of Screen 129.6	bottom of sand 129.6
	130				

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-6

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	O. Gonzalez/F. Gardella

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No.	131884-004
Date Installed	15 Dec 2020
H&A Rep.	A. Midgley
Location	N 2985799.469 E 677818.2195
Ground El.	177.3
Datum	

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
FILL	0			Grout to grade	
ICE CONTACT DEPOSITS	16.0				

Depth scale: 0, 5, 10, 15, 20, 25

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-6

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	15 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985799.469 E 677818.2195
Driller	O. Gonzalez/F. Gardella	Ground El.	177.3
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS...*continued*...	30				
	35				
	40				
	45				
				Bentonite Pellets	bottom of grout 48.0 top of bentonite pellets 48.0
	50				
	55				

HALEY ALDRICH

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

Boring No. HA20-CMT-6

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	15 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985799.469 E 677818.2195
Driller	O. Gonzalez/F. Gardella	Ground El.	177.3
		Datum	

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	Borehole Backfill	Installation Comments
ICE CONTACT DEPOSITS*...continued...*	60		
			bottom of bentonite pellets 48.0 top of sand 63.0
	65	Top of Screen 65.0 Channel 65.1-65.4 Bottom of Screen 65.5 Bentonite Pellets	
			bottom of sand 67.5 top of bentonite pellets 67.5
FLOW TILL	68.0		
GLACIAL TILL	70 / 70.0		
TOP OF ROCK 76.5 FT	75		bottom of bentonite pellets 75.0 top of sand 75.0
BEDROCK	76.5		
		Top of Screen 77.0 Channel 4 and 1 77.1-77.4 Bottom of Screen 77.5 Bentonite Pellets	
			bottom of sand 79.5 top of bentonite pellets 79.5
	80		
			bottom of bentonite pellets 81.0 top of sand 81.0
		Top of Screen 83.0 Channel 3 83.1-83.4 Bottom of Screen 83.5 Bentonite Pellets	
	85		
			bottom of sand 85.5 top of bentonite pellets 85.5

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-6

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	15 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985799.469 E 677818.2195
Driller	O. Gonzalez/F. Gardella	Ground El.	177.3
		Datum	

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
BEDROCK...*continued*...	90				
	95				
					bottom of bentonite pellets 97.5 top of sand 97.5
	100			Top of Screen 99.5 Channel 5 99.6-99.9 Bottom of Screen 100.0 Bentonite Pellets	
					bottom of sand 102.0 top of bentonite pellets 102.0
	105				
	110				
	115				
					bottom of bentonite pellets 116.0 top of sand 116.0
				Top of Screen 118.0 Channel 6 118.1-118.3 Bottom of Screen 118.5	

CONTINUOUS MULTICHANNEL TUBING WELL INSTALLATION REPORT

HALEY ALDRICH

Boring No. HA20-CMT-6

Project	NUCLEAR METALS INC.	File No.	131884-004
Location	CONCORD, MA	Date Installed	15 Dec 2020
Client	DE MAXIMIS, INC.	H&A Rep.	A. Midgley
Contractor	Cascade Drilling	Location	N 2985799.469 E 677818.2195
Driller	O. Gonzalez/F. Gardella	Ground El.	177.3
		Datum	

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Soil/Rock CONDITIONS	DEPTH (ft.)	GRAPHIC	Well Details	Borehole Backfill	Installation Comments
BEDROCK...*continued*...	120			Bentonite Pellets	bottom of sand 120.5 top of bentonite pellets 120.5
					bottom of bentonite pellets 123.3 top of sand 123.3
	125			Top of Screen 125.3 Channel 7 Bottom of Screen 126.5	bottom of sand 126.5

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. HA20-CMT-3B(OW)
Boring No. HA20-CMT-3B(OW)

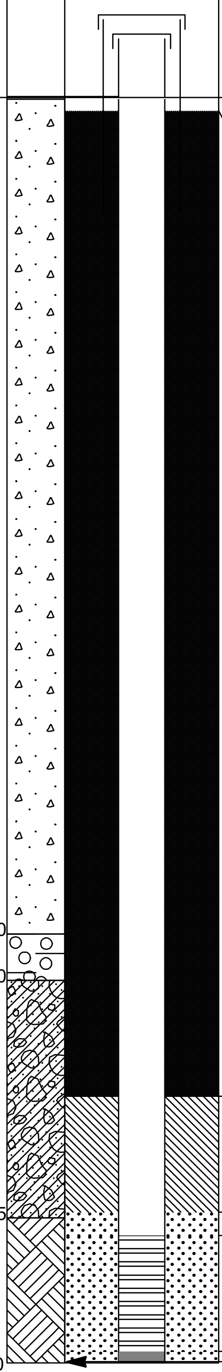
Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	R. Maillette
Initial Water Level (depth bgs)	ft

Well Diagram

- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No.	131884-004
Date Installed	08 Jan 2021
H&A Rep.	D.M. Palleiko
Location	N 2985858.92 E 677671.6452
Ground El.	181.5
Datum	NGVD, 1929

SOIL/ROCK CONDITIONS	DEPTH (ft.)
ICE CONTACT DEPOSITS	0 – 72.0
FLOW TILL	72.0 – 76.0
GLACIAL TILL	76.0 – 96.5
BEDROCK	96.5 – 109.0



DEPTH (ft.)	ELEVATION (ft.)
1.0	180.5
86.0	95.5
96.0	85.5
98.0	83.5
108.0	73.5

Depth scale: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105

WELL CONSTRUCTION DETAILS

Type of protective cover	Guard Pipe
Height of Guard Pipe above ground surface	3.0 ft
Height of top of riser above ground surface	2.8 ft
Type of protective casing	Guard Pipe
Length	5.0 ft
Inside diameter	4.0 in.
Depth of bottom of Guard Pipe	2.0 ft
Type of riser pipe	Sch. 40 PVC
Inside diameter of riser pipe	2.0 in.
Depth of bottom of riser pipe	98.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Grout	1.0	85.0
Bentonite	86.0	10.0
	-	-

Diameter of borehole	6.0 in.
Depth to top of well screen	98.0 ft
Type of screen	Machine slotted Sch 40 PVC
Screen gauge or size of openings	0.010/10 slot
Diameter of screen	2.0 in.
Type of Backfill around Screen	#0 Sand
Depth to bottom of well screen	108.0 ft
Bottom of silt trap	109.0 ft
Depth of bottom of borehole	109.0 ft

COMMENTS:

HALEY ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. HA20-CMT-3T(OW)
Boring No. HA20-CMT-3T(OW)

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	R. Maillette

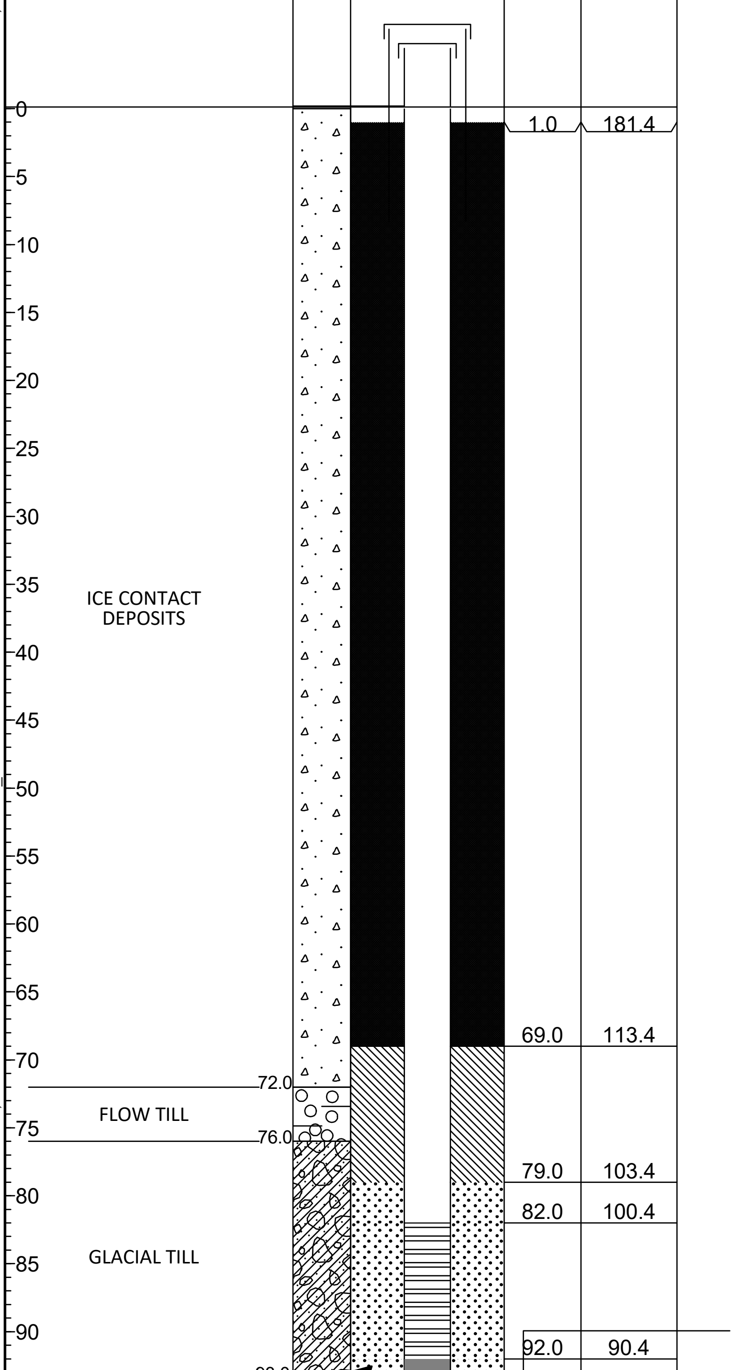
Initial Water Level (depth bgs) ft

Well Diagram

- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No.	131884-004
Date Installed	11 Jan 2021
H&A Rep.	D.M. Palleiko
Location	N 2985871.609 E 677669.132
Ground El.	182.4
Datum	NGVD, 1929

SOIL/ROCK CONDITIONS	DEPTH (ft.)
ICE CONTACT DEPOSITS	0 – 72.0
FLOW TILL	72.0 – 76.0
GLACIAL TILL	76.0 – 93.0



WELL CONSTRUCTION DETAILS

Type of protective cover: Guard Pipe

Height of Guard Pipe above ground surface: 2.6 ft

Height of top of riser above ground surface: 2.4 ft

Type of protective casing: Guard Pipe

- Length: 5.0 ft
- Inside diameter: 4.0 in.
- Depth of bottom of Guard Pipe: 2.4 ft

Type of riser pipe: Sch. 40 PVC

- Inside diameter of riser pipe: 2.0 in.
- Depth of bottom of riser pipe: 82.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Grout	1.0	68.0
Bentonite	79.0	10.0
	-	-

Diameter of borehole: 6.0 in.

Depth to top of well screen: 82.0 ft

- Type of screen: Machine slotted Sch 40 PVC
- Screen gauge or size of openings: 0.010/10 slot
- Diameter of screen: 2.0 in.
- Type of Backfill around Screen: #0 Sand
- Depth to bottom of well screen: 92.0 ft

Bottom of silt trap: 93.0 ft

Depth of bottom of borehole: 93.0 ft

COMMENTS:

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No.	HA20-CMT-5(OW)
Boring No.	HA20-CMT-5(OW)

Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	R. Maillette
Initial Water Level (depth bgs)	ft

Well Diagram

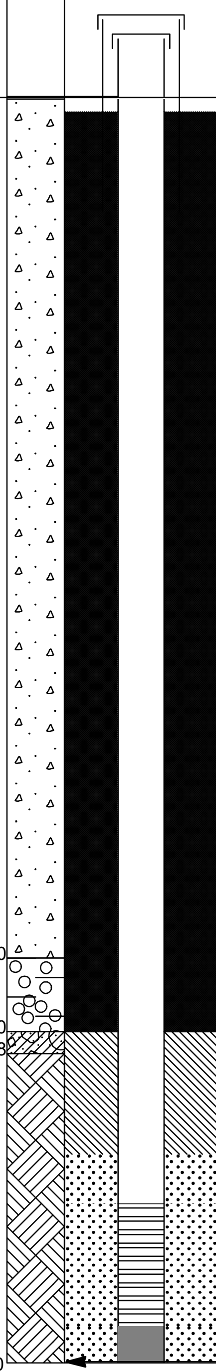
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No.	131884-004
Date Installed	16 Jan 2021
H&A Rep.	D.M. Palleiko
Location	N 2985892.135 E 677817.646
Ground El.	172.8
Datum	NGVD, 1929

SOIL/ROCK

CONDITIONS	DEPTH (ft.)
ICE CONTACT DEPOSITS	70.0
FLOW TILL	76.0
GLACIAL TILL	77.8
BEDROCK	103.0

GRAPHIC — WELL DETAILS



DEPTH (ft.)	ELEVATION (ft.)
1.0	171.8
76.0	96.8
86.0	86.8
90.0	82.8
100.0	72.8
103.0	69.8

WELL CONSTRUCTION DETAILS

Type of protective cover	Guard Pipe
Height of Guard Pipe above ground surface	3.0 ft
Height of top of riser above ground surface	2.9 ft
Type of protective casing	Guard Pipe
Length	5.0 ft
Inside diameter	4.0 in.
Depth of bottom of Guard Pipe	2.0 ft
Type of riser pipe	Sch. 40 PVC
Inside diameter of riser pipe	2.0 in.
Depth of bottom of riser pipe	90.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Grout	1.0	75.0
Bentonite	76.0	10.0
	-	-

Diameter of borehole	6.0 in.
Depth to top of well screen	90.0 ft
Type of screen	Machine slotted Sch 40 PVC
Screen gauge or size of openings	0.010/10 slot
Diameter of screen	2.0 in.
Type of Backfill around Screen	#0 Sand
Depth to bottom of well screen	100.0 ft
Bottom of silt trap	103.0 ft
Depth of bottom of borehole	103.0 ft

COMMENTS:

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. HA20-CMT-6(OW)
Boring No. HA20-CMT-6(OW)

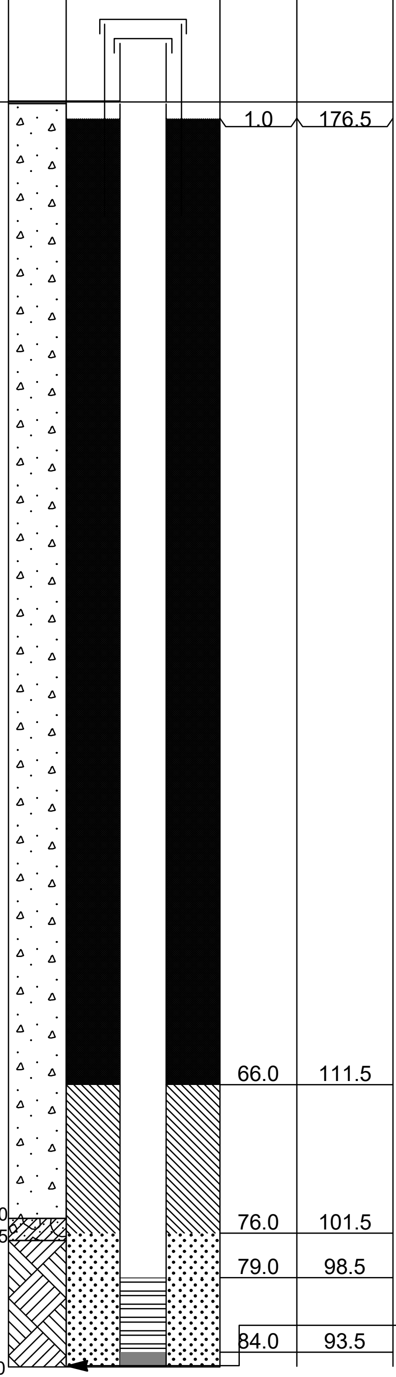
Project	NUCLEAR METALS INC.
Location	CONCORD, MA
Client	DE MAXIMIS, INC.
Contractor	Cascade Drilling
Driller	R. Maillette

Initial Water Level (depth bgs) ft

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No.	131884-004
Date Installed	13 Jan 2021
H&A Rep.	D.M. Palleiko
Location	N 2985790.239 E 677815.007
Ground El.	177.5
Datum	NGVD, 1929

SOIL/ROCK CONDITIONS	DEPTH (ft.)
ICE CONTACT DEPOSITS	75.0
GLACIAL TILL	76.5
BEDROCK	85.0



WELL DETAILS DEPTH (ft.)	ELEVATION (ft.)
1.0	176.5
66.0	111.5
76.0	101.5
79.0	98.5
84.0	93.5

WELL CONSTRUCTION DETAILS

Type of protective cover: Guard Pipe

Height of Guard Pipe above ground surface: 2.9 ft

Height of top of riser above ground surface: 2.8 ft

Type of protective casing: Guard Pipe

Length: 5.0 ft

Inside diameter: 4.0 in.

Depth of bottom of Guard Pipe: 2.1 ft

Type of riser pipe: Sch. 40 PVC

Inside diameter of riser pipe: 2.0 in.

Depth of bottom of riser pipe: 79.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Grout	1.0	65.0
Bentonite	66.0	10.0
	-	-

Diameter of borehole: 6.0 in.

Depth to top of well screen: 79.0 ft

Type of screen: Machine slotted Sch 40 PVC

Screen gauge or size of openings: 0.010/10 slot

Diameter of screen: 2.0 in.

Type of Backfill around Screen: #0 Sand

Depth to bottom of well screen: 84.0 ft

Bottom of silt trap: 85.0 ft

Depth of bottom of borehole: 85.0 ft

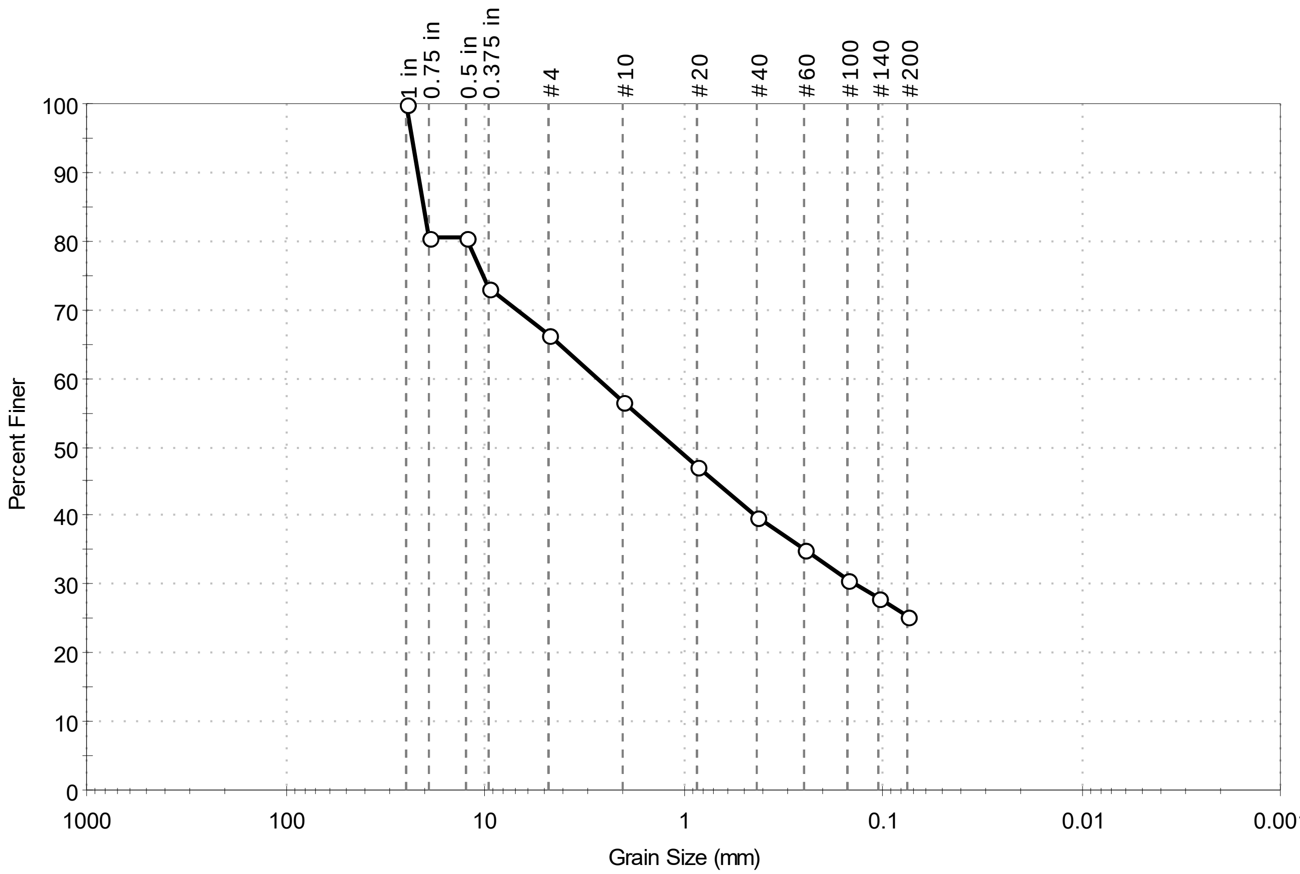
COMMENTS:

EXHIBIT HB1-4

Grain Size Distribution Testing Results

Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: HA20-B101	Sample Type: bag	Tested By:	ckg
Sample ID: S2	Test Date: 01/12/21	Checked By:	bfs
Depth : 2-4 bgs	Test Id: 607082		
Test Comment:	---		
Visual Description:	Moist, dark olive gray silty sand with gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	33.5	41.0	25.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	80		
0.5 in	12.50	80		
0.375 in	9.50	73		
#4	4.75	66		
#10	2.00	57		
#20	0.85	47		
#40	0.42	40		
#60	0.25	35		
#100	0.15	31		
#140	0.11	28		
#200	0.075	26		

Coefficients

D_{85} = 20.2442 mm D_{30} = 0.1356 mm

D_{60} = 2.7067 mm D_{15} = N/A

D_{50} = 1.0998 mm D_{10} = N/A

C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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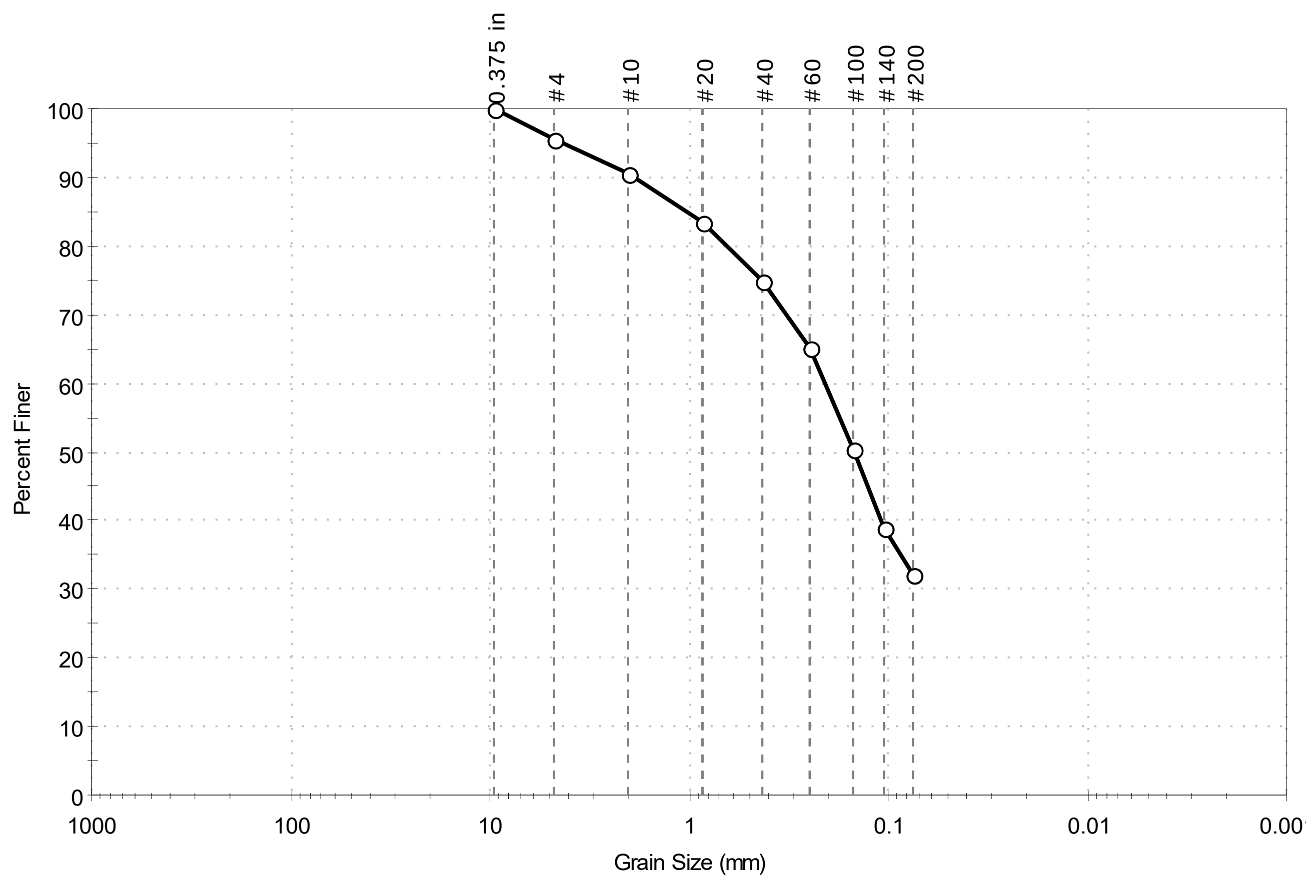
Client:	Haley & Aldrich, Inc.			
Project:	Nuclear Metals, Inc			
Location:	Concord, MA		Project No:	GTX-312539
Boring ID:	HA20-B101	Sample Type: bag	Tested By:	ckg
Sample ID:	S6	Test Date: 01/12/21	Checked By:	bfs
Depth :	12-14 bgs	Test Id: 607083		
Test Comment:	---			
Visual Description:	Moist, light yellowish brown silty sand			
Sample Comment:	---			

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	4.3	63.4	32.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	96		
#10	2.00	91		
#20	0.85	84		
#40	0.42	75		
#60	0.25	65		
#100	0.15	51		
#140	0.11	39		
#200	0.075	32		

Coefficients

D_{85} =1.0055 mm D_{30} =N/A

D_{60} =0.2091 mm D_{15} =N/A

D_{50} =0.1477 mm D_{10} =N/A

C_u =N/A C_c =N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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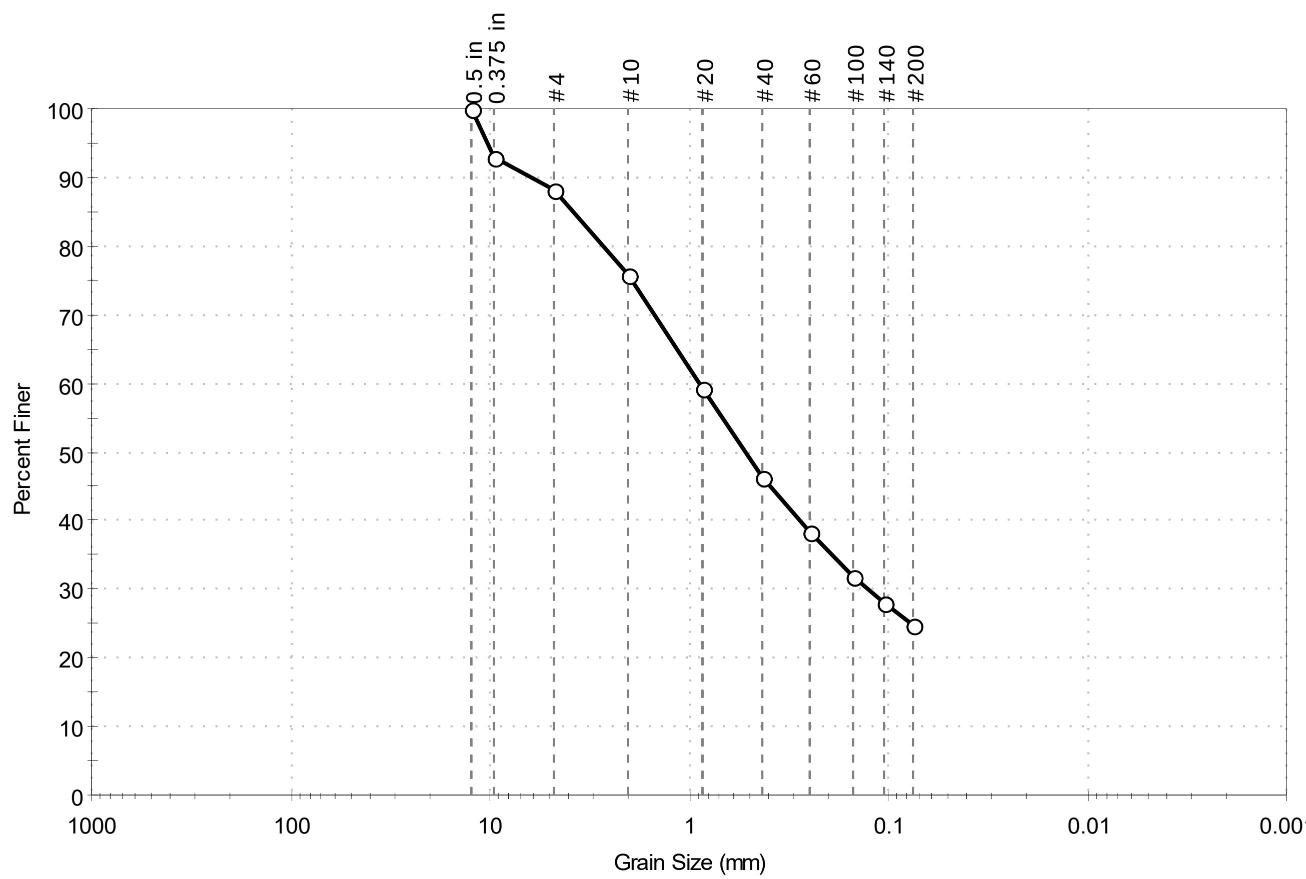
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: HA20-B102	Sample Type: bag	Tested By:	ckg
Sample ID: S2	Test Date: 01/12/21	Checked By:	bfs
Depth : 2-4 bgs	Test Id: 607084		
Test Comment:	---		
Visual Description:	Moist, dark grayish brown silty sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	11.8	63.4	24.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	93		
#4	4.75	88		
#10	2.00	76		
#20	0.85	59		
#40	0.42	46		
#60	0.25	38		
#100	0.15	32		
#140	0.11	28		
#200	0.075	25		

Coefficients

D_{85} =3.7781 mm D_{30} =0.1277 mm
D_{60} =0.8807 mm D_{15} =N/A
D_{50} =0.5182 mm D_{10} =N/A
C_u =N/A C_c =N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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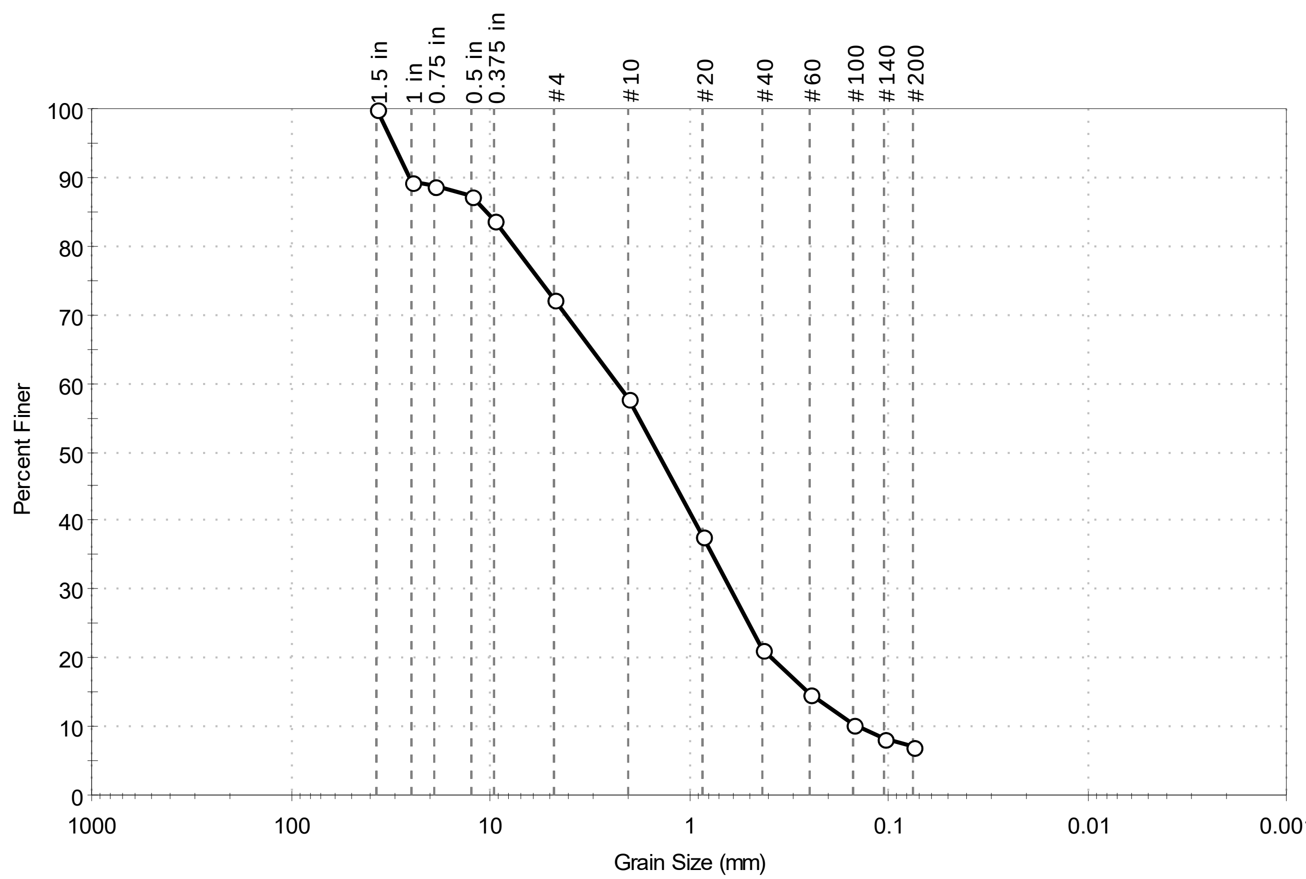
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: HA20-B102	Sample Type: bag	Tested By:	ckg
Sample ID: S12	Test Date: 01/12/21	Checked By:	bfs
Depth : 28-30 bgs	Test Id: 607085		

Test Comment: ---

Visual Description: Moist, olive brown sand with silt and gravel

Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	27.7	65.3	7.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	89		
0.75 in	19.00	89		
0.5 in	12.50	87		
0.375 in	9.50	84		
#4	4.75	72		
#10	2.00	58		
#20	0.85	38		
#40	0.42	21		
#60	0.25	15		
#100	0.15	10		
#140	0.11	8		
#200	0.075	7.0		

Coefficients

D_{85} = 10.4178 mm D_{30} = 0.6161 mm

D_{60} = 2.2640 mm D_{15} = 0.2572 mm

D_{50} = 1.4314 mm D_{10} = 0.1388 mm

C_u = 16.311 C_c = 1.208

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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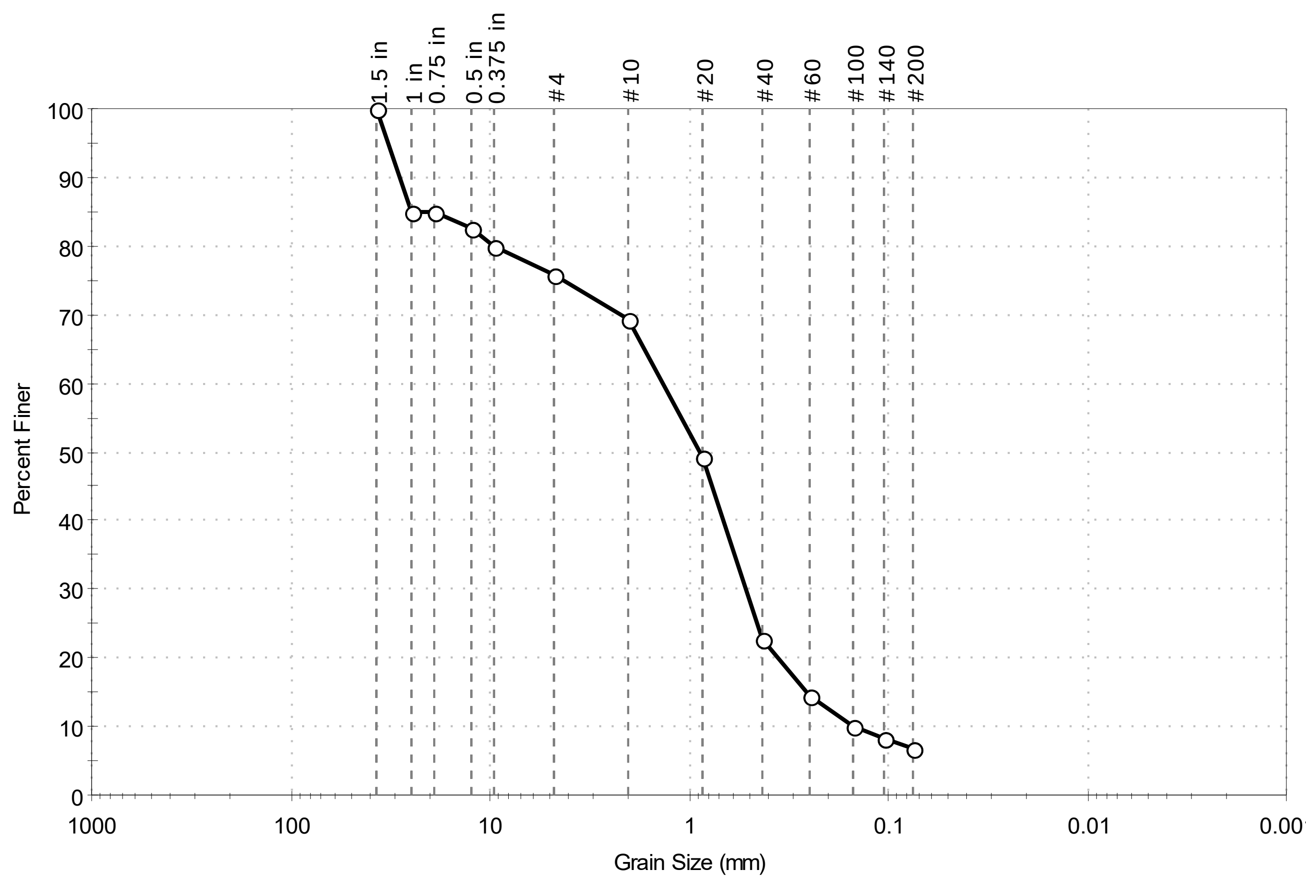
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	HA20-B102	Sample Type:	bag	Tested By:	ckg
Sample ID:	S14	Test Date:	01/12/21	Checked By:	bfs
Depth :	34-36 bgs	Test Id:	607086		

Test Comment: ---
Visual Description: Moist, olive brown sand with silt and gravel
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	24.3	68.9	6.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	85		
0.75 in	19.00	85		
0.5 in	12.50	83		
0.375 in	9.50	80		
#4	4.75	76		
#10	2.00	69		
#20	0.85	49		
#40	0.42	23		
#60	0.25	15		
#100	0.15	10		
#140	0.11	8		
#200	0.075	6.8		

Coefficients

D_{85} =25.0569 mm | D_{30} =0.5145 mm
D_{60} =1.3397 mm | D_{15} =0.2580 mm
D_{50} =0.8746 mm | D_{10} =0.1466 mm
C_u =9.138 | C_c =1.348

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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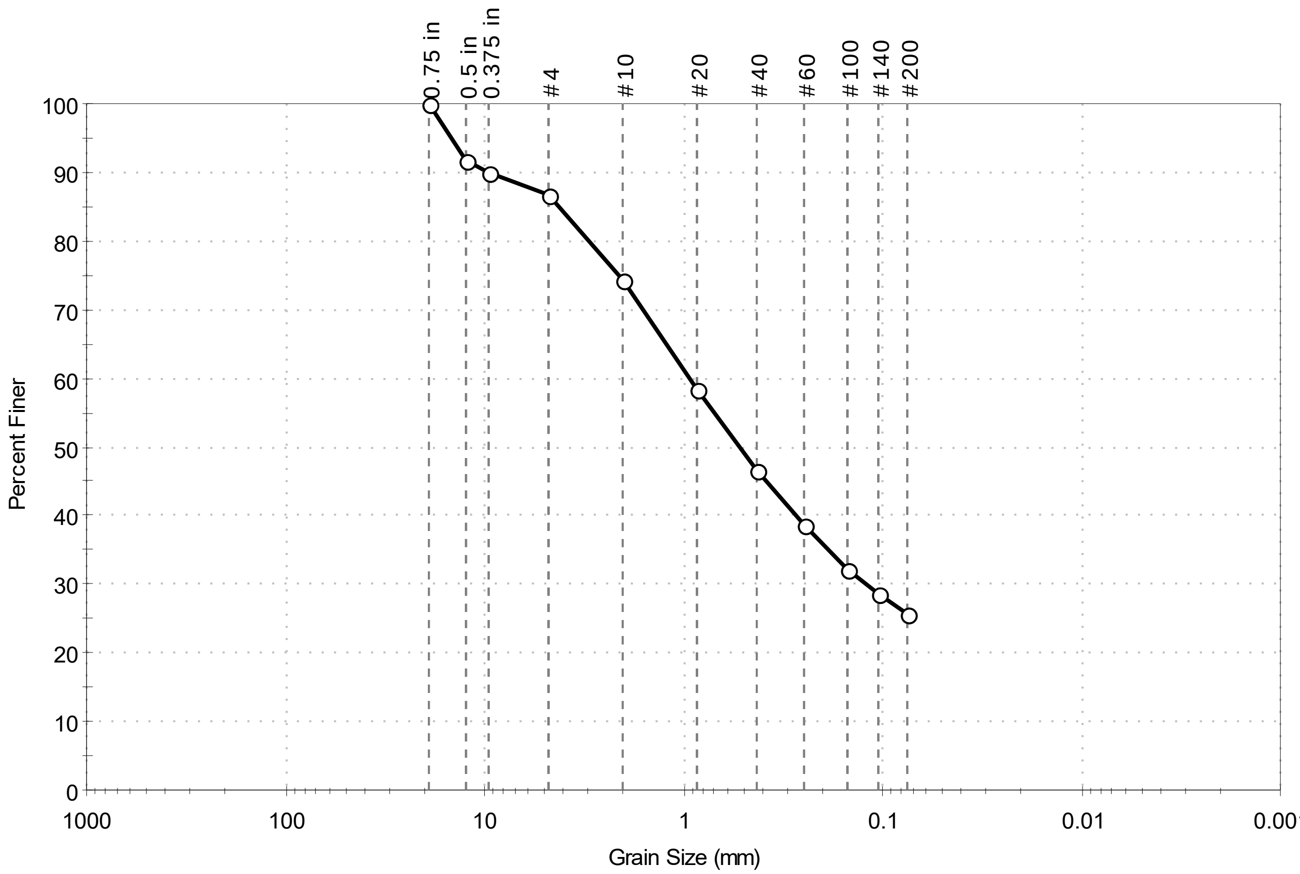
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	HA20-B103	Sample Type:	bag	Tested By:	ckg
Sample ID:	S3	Test Date:	01/12/21	Checked By:	bfs
Depth :	4-6 bgs	Test Id:	607087		
Test Comment:	---				
Visual Description:	Moist, grayish brown silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	13.3	61.0	25.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	92		
0.375 in	9.50	90		
#4	4.75	87		
#10	2.00	74		
#20	0.85	58		
#40	0.42	46		
#60	0.25	39		
#100	0.15	32		
#140	0.11	29		
#200	0.075	26		

Coefficients

D_{85} = 4.2078 mm
D_{30} = 0.1211 mm
D_{60} = 0.9324 mm
D_{15} = N/A
D_{50} = 0.5223 mm
D_{10} = N/A
C_u = N/A
C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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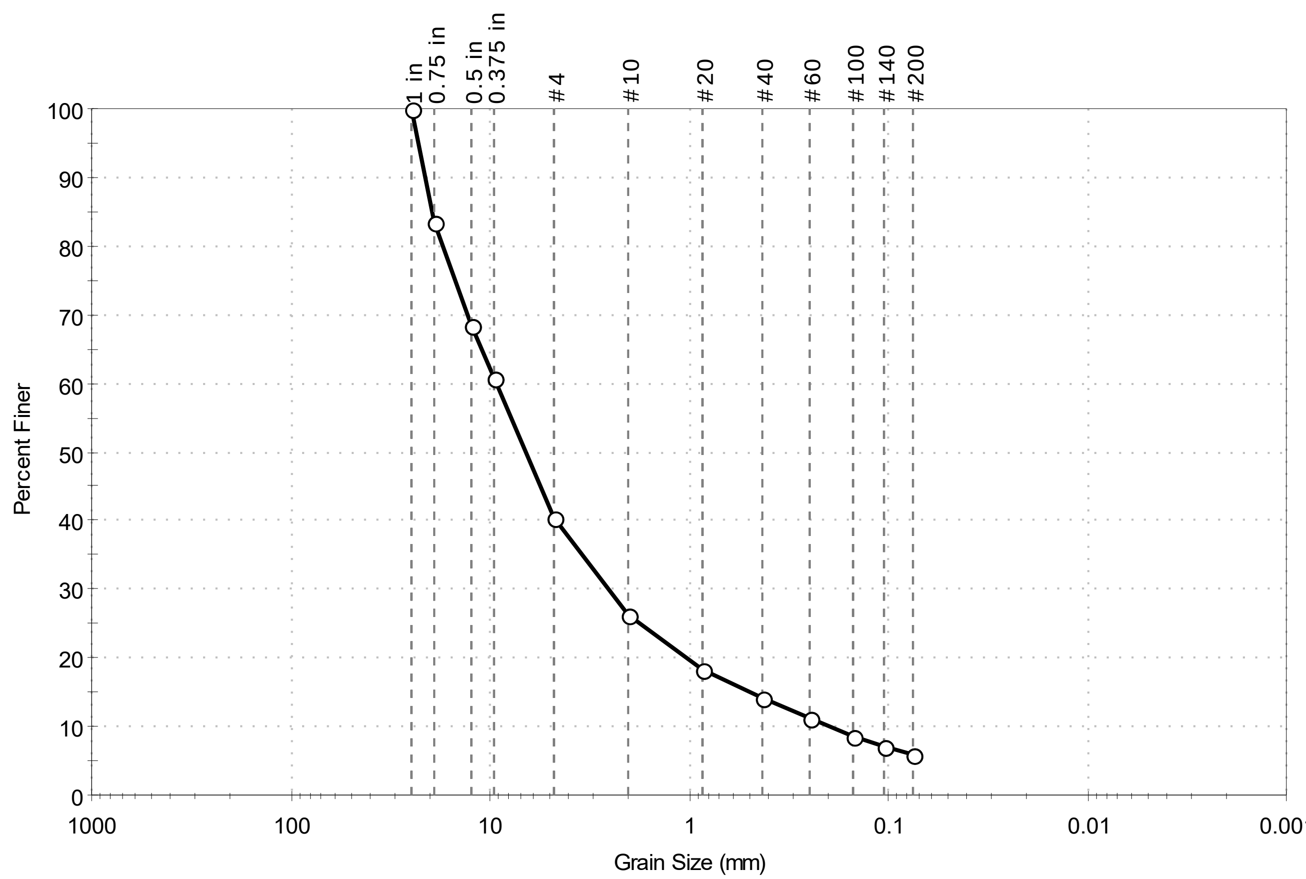
GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.
Project:	Nuclear Metals, Inc
Location:	Concord, MA
Project No:	GTX-312539
Boring ID:	HA20-B103
Sample Type:	bag
Tested By:	ckg
Sample ID:	S10
Test Date:	01/12/21
Checked By:	bfs
Depth :	20-22 bgs
Test Id:	607088
Test Comment:	---
Visual Description:	Moist, gray gravel with silt and sand
Sample Comment:	---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	59.7	34.5	5.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	84		
0.5 in	12.50	68		
0.375 in	9.50	61		
#4	4.75	40		
#10	2.00	26		
#20	0.85	18		
#40	0.42	14		
#60	0.25	11		
#100	0.15	9		
#140	0.11	7		
#200	0.075	5.8		

Coefficients

D_{85} = 19.4711 mm
D_{30} = 2.5219 mm
D_{60} = 9.2376 mm
D_{15} = 0.4970 mm
D_{50} = 6.5832 mm
D_{10} = 0.1972 mm
C_u = 46.844
C_c = 3.491

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (1))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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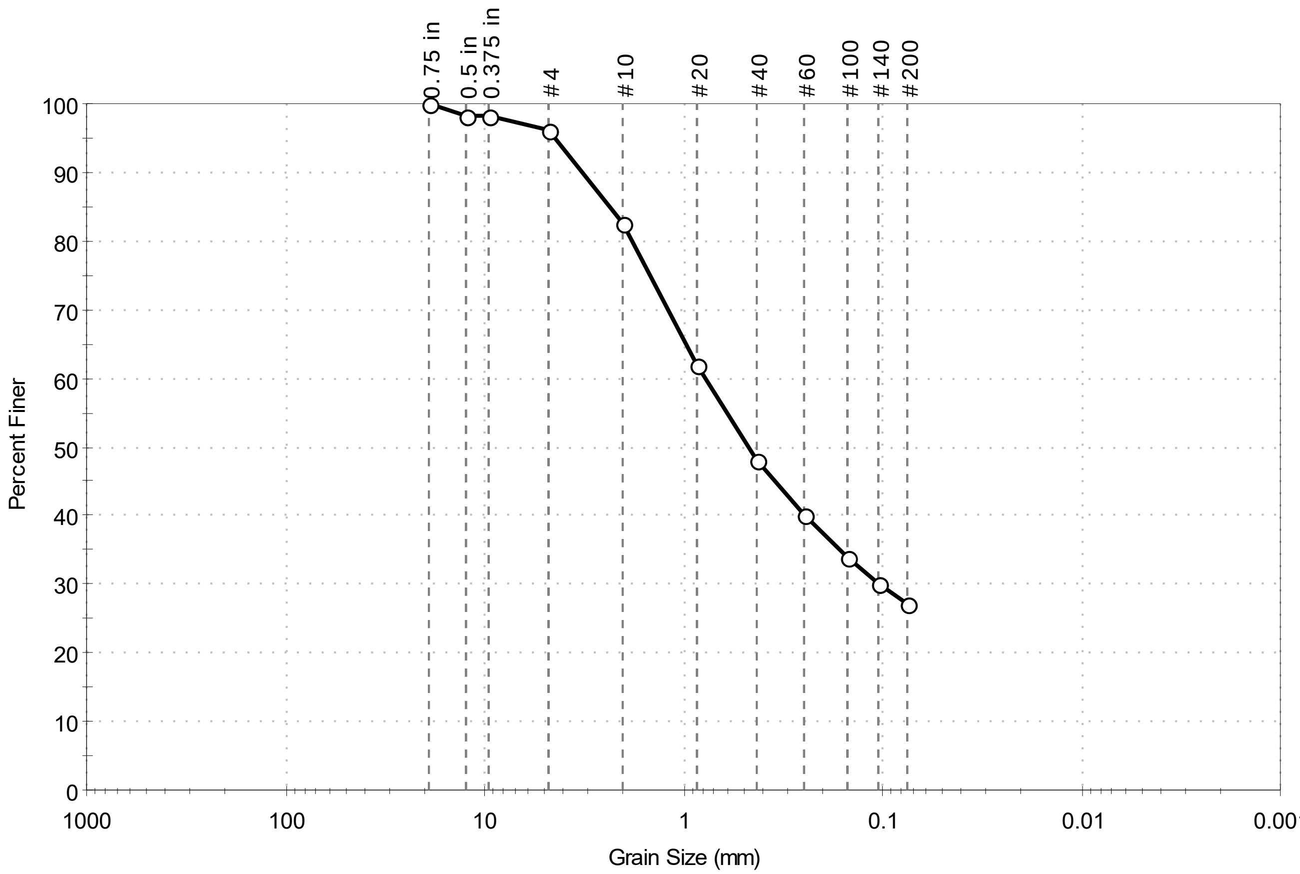
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	HA20-B104	Sample Type:	bag	Tested By:	ckg
Sample ID:	S1	Test Date:	01/12/21	Checked By:	bfs
Depth :	0-2 bgs	Test Id:	607089		
Test Comment:	---				
Visual Description:	Moist, gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	3.8	69.0	27.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	98		
0.375 in	9.50	98		
#4	4.75	96		
#10	2.00	83		
#20	0.85	62		
#40	0.42	48		
#60	0.25	40		
#100	0.15	34		
#140	0.11	30		
#200	0.075	27		

Coefficients

D_{85} = 2.3231 mm D_{30} = 0.1043 mm

D_{60} = 0.7706 mm D_{15} = N/A

D_{50} = 0.4660 mm D_{10} = N/A

C_u = N/A C_c = N/A

Classification

ASTM   N/A

AASHTO   Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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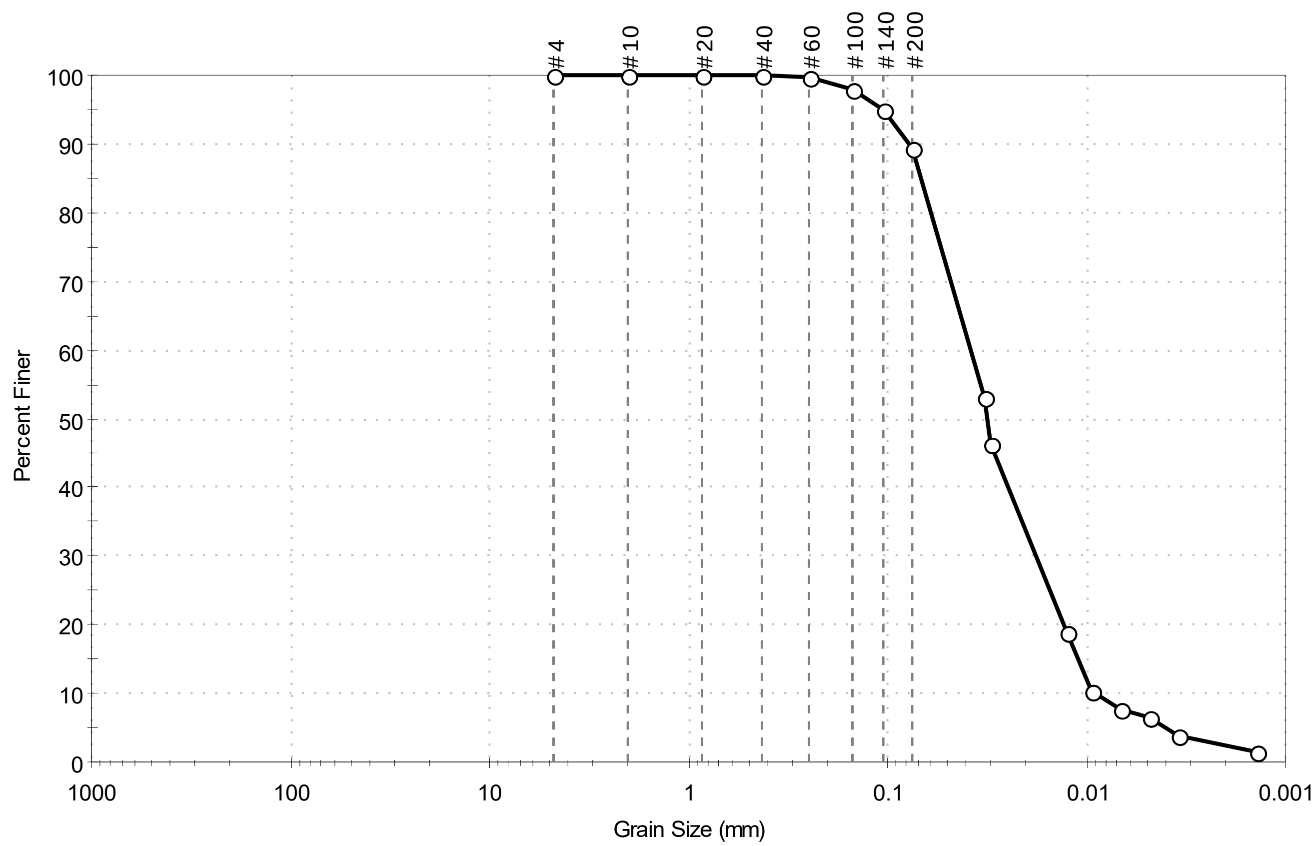
Client: Haley & Aldrich, Inc.
Project: Nuclear Metals, Inc
Location: Concord, MA
Project No: GTX-312539

Boring ID:	HA20-B104	Sample Type:	bag	Tested By:	ckg
Sample ID:	S13	Test Date:	01/15/21	Checked By:	bfs
Depth :	24-26 bgs	Test Id:	607093		

Test Comment: ---
Visual Description: Moist, light olive brown silt
Sample Comment: ---

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	10.6	89.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	100		
#100	0.15	98		
#140	0.11	95		
#200	0.075	89		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0329	53		
---	0.0305	46		
---	0.0125	19		
---	0.0095	10		
---	0.0068	8		
---	0.0048	7		
---	0.0034	4		
---	0.0014	2		

Coefficients

D_{85} = 0.0679 mm D_{30} = 0.0179 mm
D_{60} = 0.0385 mm D_{15} = 0.0110 mm
D_{50} = 0.0318 mm D_{10} = 0.0091 mm
C_u = 4.231 C_c = 0.915

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---
Dispersion Device : Apparatus A - Mech Mixer
Dispersion Period : 1 minute
Est. Specific Gravity : 2.65
Separation of Sample: #200 Sieve

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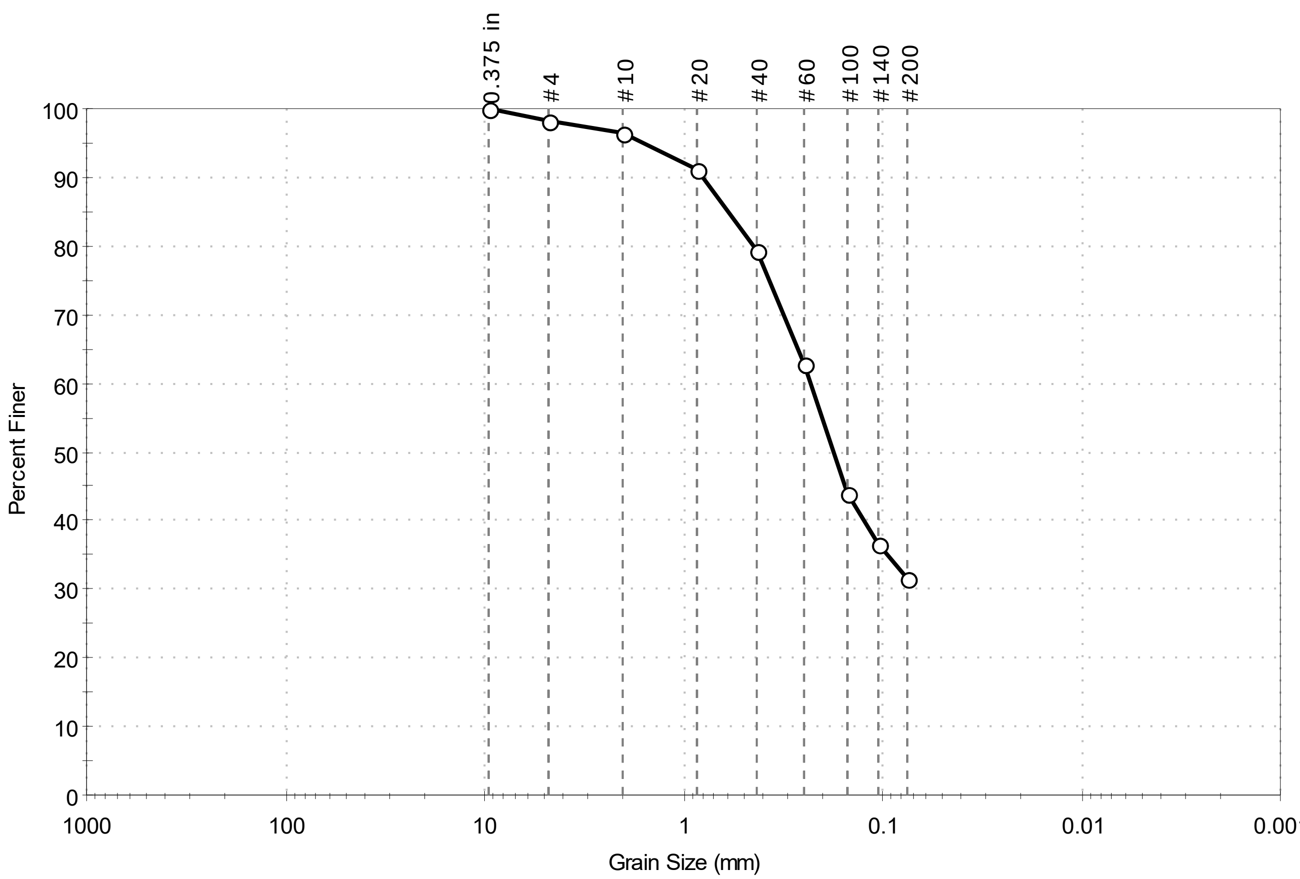
Client:	Haley & Aldrich, Inc.
Project:	Nuclear Metals, Inc
Location:	Concord, MA
Project No:	GTX-312539
Boring ID:	HA20-B104
Sample ID:	S15
Depth :	28-30 bgs
Sample Type:	bag
Test Date:	01/12/21
Test Id:	607090
Tested By:	ckg
Checked By:	bfs
Test Comment:	---
Visual Description:	Moist, light olive brown silty sand
Sample Comment:	---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.9	66.6	31.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	96		
#20	0.85	91		
#40	0.42	79		
#60	0.25	63		
#100	0.15	44		
#140	0.11	37		
#200	0.075	32		

Coefficients

D_{85} = 0.5898 mm
D_{30} = N/A
D_{60} = 0.2314 mm
D_{15} = N/A
D_{50} = 0.1769 mm
D_{10} = N/A
C_u = N/A
C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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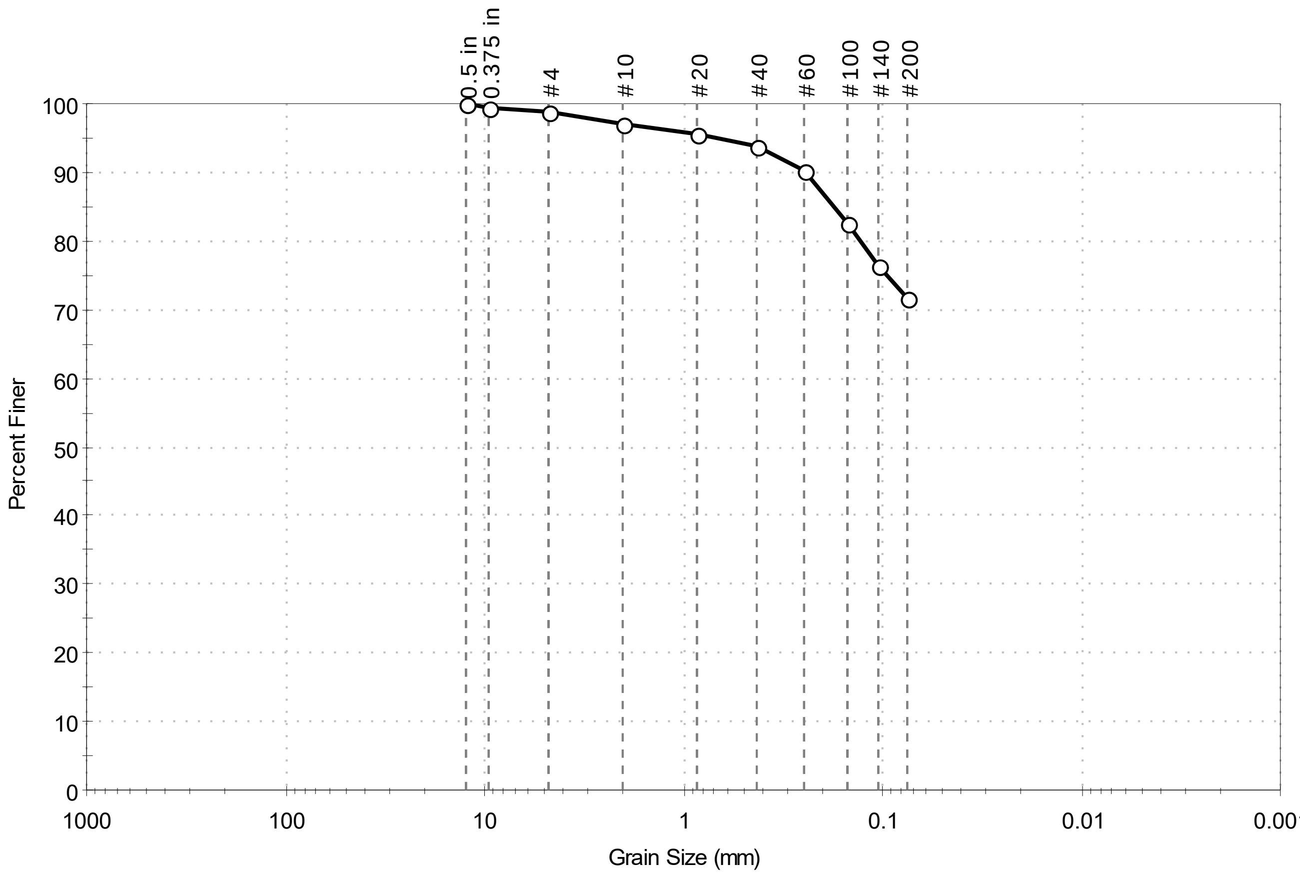
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: HA20-B104	Sample Type: bag	Tested By:	ckg
Sample ID: S18	Test Date: 01/12/21	Checked By:	bfs
Depth : 38-40 bgs	Test Id: 607091		
Test Comment:	---		
Visual Description:	Moist, light olive brown silt with sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.3	27.0	71.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	99		
#10	2.00	97		
#20	0.85	96		
#40	0.42	94		
#60	0.25	90		
#100	0.15	83		
#140	0.11	76		
#200	0.075	72		

Coefficients

D_{85} = 0.1745 mm D_{30} = N/A
D_{60} = N/A D_{15} = N/A
D_{50} = N/A D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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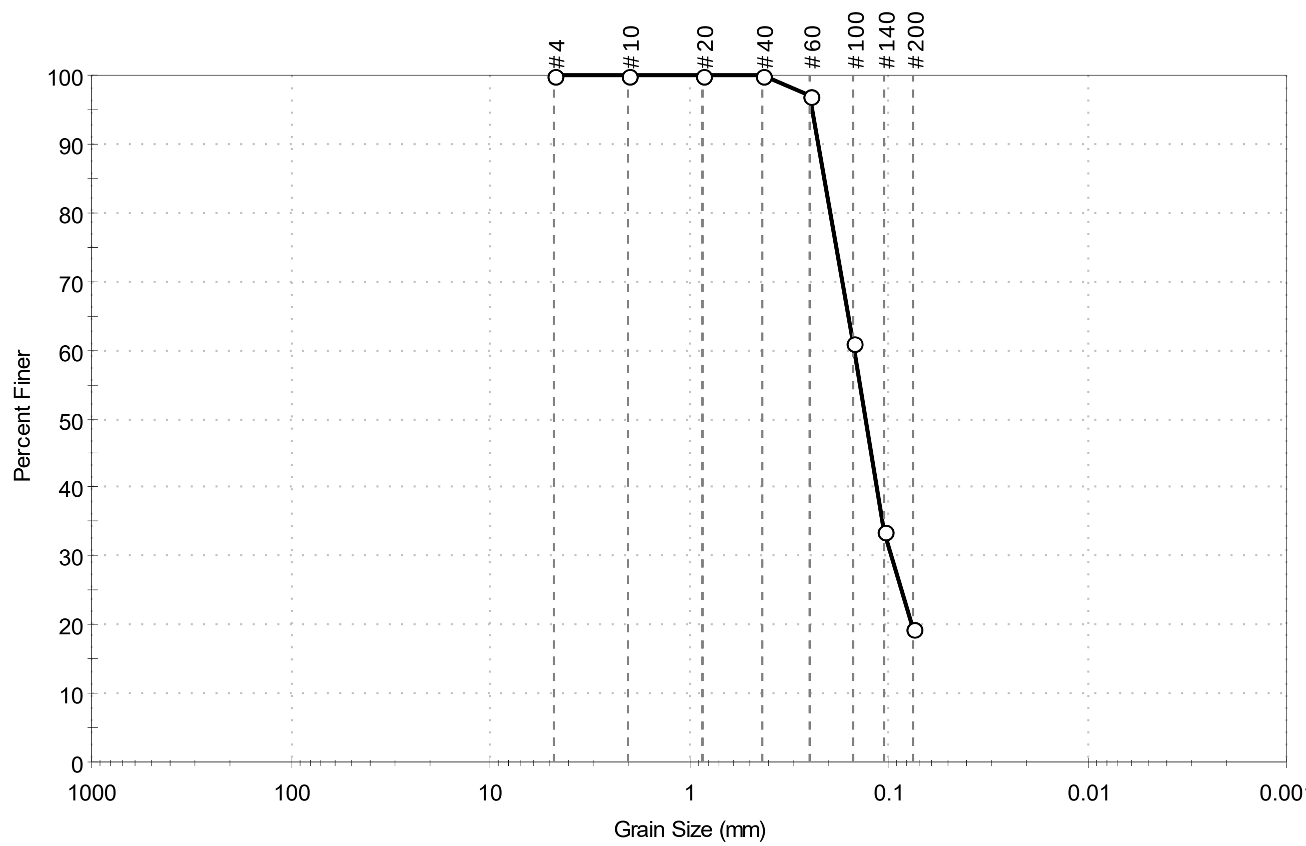
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: HA20-B104	Sample Type: bag	Tested By:	ckg
Sample ID: S20	Test Date: 01/12/21	Checked By:	bfs
Depth : 42-44 bgs	Test Id: 607092		

Test Comment: ---
Visual Description: Moist, light olive brown silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	80.6	19.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	97		
#100	0.15	61		
#140	0.11	34		
#200	0.075	19		

Coefficients

D_{85} =0.2104 mm | D_{30} =0.0970 mm
D_{60} =0.1480 mm | D_{15} =N/A
D_{50} =0.1304 mm | D_{10} =N/A
C_u =N/A | C_c =N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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EXHIBIT HB1-5

Bedrock Core Photo-Log and Rock Core Testing Results

Client: Haley & Aldrich, Inc.			
Project: Nuclear Metals, Inc			
Location: Concord, MA		Project No:	GTX-312539
Boring ID: HA20-CMT-1-C1	Sample Type: cylinder	Tested By:	tlm
Sample ID: ---	Test Date: 02/04/21	Checked By:	smd
Depth : 77.2-78.0	Test Id: 608694		
Test Comment: ---			
Visual Description: ---			
Sample Comment: ---			

Abrasiveness of Rock Using the Cerchar Method by ASTM D7625

Boring ID	Sample ID	Depth	Stylus No	Reading 1	Reading 2	Average	Comments
HA20-CMT-1-C1	---	77.29-77.39 ft	1	4.2	3.6	3.90	
			2	4.5	3.6	4.05	
			3	3.1	3.3	3.20	
			4	4.0	4.7	4.35	
			5	2.9	3.9	3.40	
			Average CAIs			3.78	
			Average CAI *			4.22	
			CERCHAR Abrasiveness Index Classification			**Extreme abrasiveness**	

Notes

Test Surface: Saw Cut
Moisture Condition: As Received
Apparatus Type: Original CERCHAR
Stylus Hardness: Rockwell Hardess 54/56 HRC
Stylus Displacement Relative to Rock Fabric:
Styli 1-3: Normal; Styli 4-5: Parallel
* CAI = (0.99 * CAIs) + 0.48
CAIs = CERCHAR index for smooth (saw cut) surface
CAI = CERCHAR index for natural surface
Comments:

Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: HA20-CMT-2-C1	Sample Type: cylinder	Tested By:	tlm
Sample ID: ---	Test Date: 02/04/21	Checked By:	smd
Depth : 90.5-92.3	Test Id: 608689		
Test Comment: ---			
Visual Description: ---			
Sample Comment: ---			

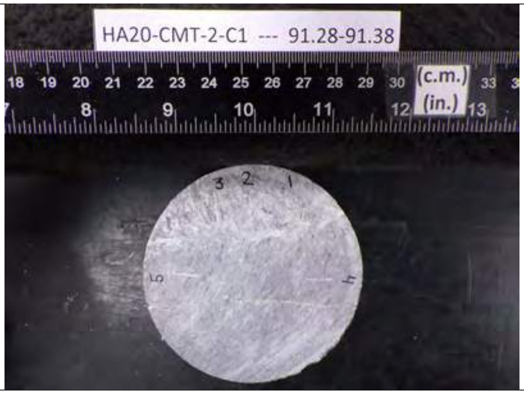
Abrasiveness of Rock Using the Cerchar Method by ASTM D7625

Boring ID	Sample ID	Depth	Stylus No	Reading 1	Reading 2	Average	Comments
HA20-CMT-2-C1	---	91.28-91.38 ft	1	1.6	3.2	2.40	
			2	1.5	2.1	1.80	
			3	2.6	3.1	2.85	
			4	1.5	2.0	1.75	
			5	2.3	2.7	2.50	
			Average CAIs			2.26	
			Average CAI *			2.72	

CERCHAR Abrasiveness Index Classification | **High abrasiveness**

Notes

Test Surface: Saw Cut
Moisture Condition: As Received
Apparatus Type: Original CERCHAR
Stylus Hardness: Rockwell Hardess 54/56 HRC
Stylus Displacement Relative to Rock Fabric:
Styli 1-3: Normal; Styli 4-5: Parallel
* CAI = (0.99 * CAIs) + 0.48
CAIs = CERCHAR index for smooth (saw cut) surface
CAI = CERCHAR index for natural surface
Comments:



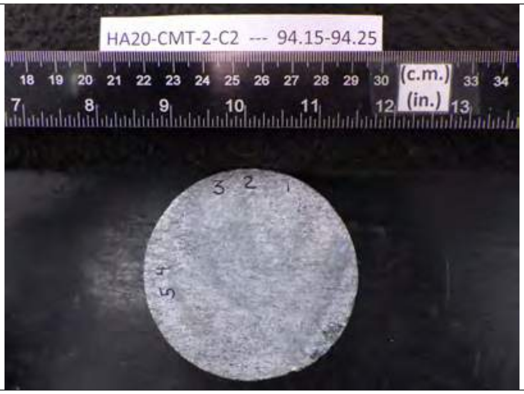
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	HA20-CMT-2-C2	Sample Type:	cylinder	Tested By:	tlm
Sample ID:	---	Test Date:	02/04/21	Checked By:	smd
Depth :	94.3-96.0	Test Id:	608690		
Test Comment:	---				
Visual Description:	---				
Sample Comment:	---				

Abrasiveness of Rock Using the Cerchar Method by ASTM D7625

Boring ID	Sample ID	Depth	Stylus No	Reading 1	Reading 2	Average	Comments
HA20-CMT-2-C2	---	94.15-94.25 ft	1	4.9	4.7	4.80	
			2	5.5	4.6	5.05	
			3	3.1	3.5	3.30	
			4	3.1	3.0	3.05	
			5	5.3	3.2	4.25	
			Average CAIs			4.09	
			Average CAI *			4.53	
			CERCHAR Abrasiveness Index Classification			**Extreme abrasiveness**	

Notes

Test Surface: Saw Cut
Moisture Condition: As Received
Apparatus Type: Original CERCHAR
Stylus Hardness: Rockwell Hardess 54/56 HRC
Stylus Displacement Relative to Rock Fabric:
Styli 1-3: Normal; Styli 4-5: Parallel
* CAI = (0.99 * CAIs) + 0.48
CAIs = CERCHAR index for smooth (saw cut) surface
CAI = CERCHAR index for natural surface
Comments:



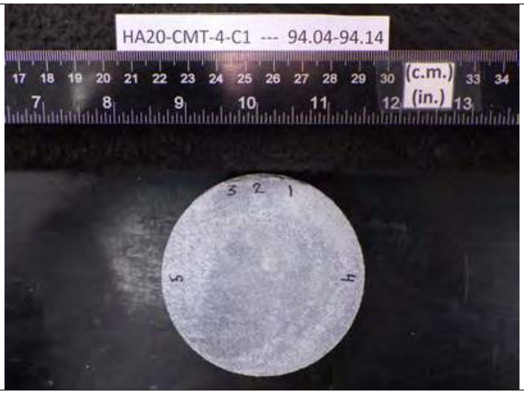
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	HA20-CMT-4-C1	Sample Type:	cylinder	Tested By:	tlm
Sample ID:	---	Test Date:	02/04/21	Checked By:	smd
Depth :	93.2-94.9	Test Id:	608695		
Test Comment:	---				
Visual Description:	---				
Sample Comment:	---				

Abrasiveness of Rock Using the Cerchar Method by ASTM D7625

Boring ID	Sample ID	Depth	Stylus No	Reading 1	Reading 2	Average	Comments
HA20-CMT-4-C1	---	94.04-94.14 ft	1	3.3	4.0	3.65	
			2	3.8	3.4	3.60	
			3	4.5	4.3	4.40	
			4	4.1	3.8	3.95	
			5	4.0	4.6	4.30	
			Average CAIs			3.98	
			Average CAI *			4.42	
				CERCHAR Abrasiveness Index Classification		**Extreme abrasiveness**	

Notes

Test Surface: Saw Cut
Moisture Condition: As Received
Apparatus Type: Original CERCHAR
Stylus Hardness: Rockwell Hardess 54/56 HRC
Stylus Displacement Relative to Rock Fabric:
Styli 1-3: Normal; Styli 4-5: Parallel
* CAI = (0.99 * CAIs) + 0.48
CAIs = CERCHAR index for smooth (saw cut) surface
CAI = CERCHAR index for natural surface
Comments:



GeoTesting
EXPRESS

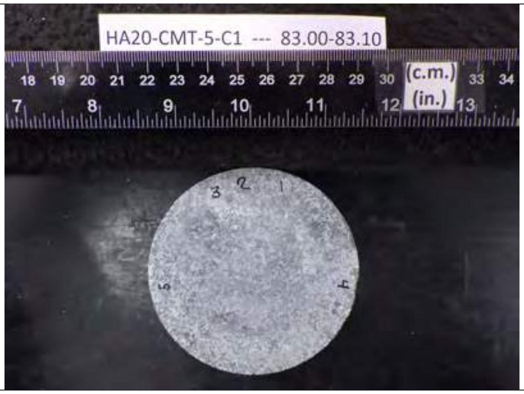
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: HA20-CMT-5-C1	Sample Type: cylinder	Tested By:	tlm
Sample ID: ---	Test Date: 02/04/21	Checked By:	smd
Depth : 81.9-83.5	Test Id: 608696		
Test Comment: ---			
Visual Description: ---			
Sample Comment: ---			

Abrasiveness of Rock Using the Cerchar Method by ASTM D7625

Boring ID	Sample ID	Depth	Stylus No	Reading 1	Reading 2	Average	Comments
HA20-CMT-5-C1	---	83.00-83.10 ft	1	2.6	3.4	3.00	
			2	3.9	4.0	3.95	
			3	4.7	4.3	4.50	
			4	3.6	3.5	3.55	
			5	4.0	4.2	4.10	
			Average CAIs			3.82	
			Average CAI *			4.26	
			CERCHAR Abrasiveness Index Classification			**Extreme abrasiveness**	

Notes

Test Surface: Saw Cut
Moisture Condition: As Received
Apparatus Type: Original CERCHAR
Stylus Hardness: Rockwell Hardess 54/56 HRC
Stylus Displacement Relative to Rock Fabric:
Styli 1-3: Normal; Styli 4-5: Parallel
* CAI = (0.99 * CAIs) + 0.48
CAIs = CERCHAR index for smooth (saw cut) surface
CAI = CERCHAR index for natural surface
Comments:



GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	HAGP102A-C2	Sample Type:	cylinder	Tested By:	tlm
Sample ID:	---	Test Date:	02/04/21	Checked By:	smd
Depth :	98.5-99.5	Test Id:	608691		
Test Comment:	---				
Visual Description:	---				
Sample Comment:	---				

Abrasiveness of Rock Using the Cerchar Method by ASTM D7625

Boring ID	Sample ID	Depth	Stylus No	Reading 1	Reading 2	Average	Comments
HAGP102A-C2	---	99.27-99.37 ft	1	3.6	3.5	3.55	
			2	3.5	3.2	3.35	
			3	5.0	4.5	4.75	
			4	2.7	3.3	3.00	
			5	4.1	4.7	4.40	
			Average CAIs			3.81	
			Average CAI *			4.25	
CERCHAR Abrasiveness Index Classification						**Extreme abrasiveness**	

Notes

Test Surface: Saw Cut
Moisture Condition: As Received
Apparatus Type: Original CERCHAR
Stylus Hardness: Rockwell Hardess 54/56 HRC
Stylus Displacement Relative to Rock Fabric:
Styli 1-3: Normal; Styli 4-5: Parallel
* CAI = (0.99 * CAIs) + 0.48
CAIs = CERCHAR index for smooth (saw cut) surface
CAI = CERCHAR index for natural surface
Comments:

GeoTesting EXPRESS

Client: Haley & Aldrich, Inc.				
Project: Nuclear Metals, Inc				
Location: Concord, MA			Project No:	GTX-312539
Boring ID: HAGP102A-C4	Sample Type:	cylinder	Tested By:	tlm
Sample ID: ---	Test Date:	02/04/21	Checked By:	smd
Depth : 108.7-109.7	Test Id:	608692		
Test Comment: ---				
Visual Description: ---				
Sample Comment: ---				

Abrasiveness of Rock Using the Cerchar Method by ASTM D7625

Boring ID	Sample ID	Depth	Stylus No	Reading 1	Reading 2	Average	Comments
HAGP102A-C4	---	109.48-109.58 ft	1	3.9	2.7	3.30	
			2	3.3	3.0	3.15	
			3	4.9	4.2	4.55	
			4	2.4	2.5	2.45	
			5	4.0	4.3	4.15	
			Average CAIs			3.52	
			Average CAI *			3.96	
CERCHAR Abrasiveness Index Classification						**High abrasiveness**	

Notes

Test Surface: Saw Cut
Moisture Condition: As Received
Apparatus Type: Original CERCHAR
Stylus Hardness: Rockwell Hardess 54/56 HRC
Stylus Displacement Relative to Rock Fabric:
Styli 1-3: Normal; Styli 4-5: Parallel
* CAI = (0.99 * CAIs) + 0.48
CAIs = CERCHAR index for smooth (saw cut) surface
CAI = CERCHAR index for natural surface
Comments:

GeoTesting EXPRESS

Client: Haley & Aldrich, Inc.
Project: Nuclear Metals, Inc
Location: Concord, MA
Project No: GTX-312539

Boring ID: HAGP105-C1
Sample ID: ---
Depth : 110.4-111.8
Sample Type: cylinder
Test Date: 02/04/21
Test Id: 608693
Tested By: tlm
Checked By: smd

Test Comment: ---
Visual Description: ---
Sample Comment: ---

Abrasiveness of Rock Using the Cerchar Method by ASTM D7625

Boring ID	Sample ID	Depth	Stylus No	Reading 1	Reading 2	Average	Comments
HAGP105-C1	---	111.21-111.31 ft	1	4.2	4.5	4.35	
			2	3.9	3.6	3.75	
			3	3.3	3.4	3.35	
			4	2.3	3.4	2.85	
			5	4.7	5.2	4.95	
			Average CAIs			3.85	
			Average CAI *			4.29	

CERCHAR Abrasiveness Index Classification: **Extreme abrasiveness**

Notes

Test Surface: Saw Cut
Moisture Condition: As Received
Apparatus Type: Original CERCHAR
Stylus Hardness: Rockwell Hardess 54/56 HRC
Stylus Displacement Relative to Rock Fabric:
Styli 1-3: Normal; Styli 4-5: Parallel
* CAI = (0.99 * CAIs) + 0.48
CAIs = CERCHAR index for smooth (saw cut) surface
CAI = CERCHAR index for natural surface
Comments:

Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	---	Tested By:	tlm
Sample ID:	---	Test Date:	02/10/21	Checked By:	smd
Depth :	---	Test Id:	608707		

Bulk Density and Compressive Strength of Rock Core Specimens by ASTM D7012 Method C

Boring ID	Sample Number	Depth	Bulk Density, pcf	Compressive strength, psi	Failure Type	Meets ASTM D4543	Note(s)
HA20-CMT-1-C2	---	80.68-81.36 ft	180	2878	3	No	1,*
HA20-CMT-1-C4	---	89.90-90.59 ft	176	11015	1	No	1,*
HA20-CMT-2-C1	---	90.60-91.27 ft	166	5963	1	No	1 , 2,*
HA20-CMT-2-C2	---	94.46-95.14 ft	176	19665	1	No	1,*
HA20-CMT-2-C4	---	103.31-103.95 ft	167	27317	1	No	1,*
HA20-CMT-4-C1	---	93.34-94.03 ft	168	31073	1	No	1,*
HA20-CMT-4-C2	---	98.61-99.26 ft	172	20892	1	No	1,*

Notes: Density determined on core samples by measuring dimensions and weight and then calculating.

All specimens tested at the approximate as-received moisture content and at standard laboratory temperature.

The axial load was applied continuously at a stress rate that produced failure in a test time between 2 and 15 minutes.

Failure Type: 1 = Intact Material Failure; 2 = Discontinuity Failure; 3 = Intact Material and Discontinuity Failure (See attached photographs)

1: Best effort end preparation. See Tolerance report for details.
2: The as-received core did not meet the ASTM side straightness tolerance due to irregularities in the sample as cored.
3: Specimen L/D < 2.
4: The as-received core did not meet the ASTM minimum diameter tolerance of 1.875 inches.
5: Specimen diameter is less than 10 times maximum particle size.
6: Specimen diameter is less than 6 times maximum particle size.

*Because the indicated tested specimens did not meet the ASTM D4543 standard tolerances, the results reported here may differ from those for a test specimen within tolerances.

Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	---	Tested By:	tlm
Sample ID:	---	Test Date:	02/10/21	Checked By:	smd
Depth :	---	Test Id:	608702		

Bulk Density and Compressive Strength of Rock Core Specimens by ASTM D7012 Method C

Boring ID	Sample Number	Depth	Bulk Density, pcf	Compressive strength, psi	Failure Type	Meets ASTM D4543	Note(s)
HA20-CMT-4-C3	---	103.17-103.87 ft	172	17011	1	No	1,*
HA20-CMT-5-C1	---	82.31-82.99 ft	177	23759	1	No	1 , 2,*
HA20-CMT-5-C2	---	87.50-88.19 ft	178	25750	1	No	1,*
HA20-CMT-5-C3	---	90.09-90.76 ft	178	27932	1	No	1,*
HAGP102A-C2	---	98.59-99.26 ft	181	24272	1	No	1,*
HAGP102A-C3	---	101.71-102.39 ft	179	21260	1	No	1,*
HAGP102A-C4	---	108.83-109.47 ft	162	10898	1	No	1,*

Notes: Density determined on core samples by measuring dimensions and weight and then calculating.

All specimens tested at the approximate as-received moisture content and at standard laboratory temperature.

The axial load was applied continuously at a stress rate that produced failure in a test time between 2 and 15 minutes.

Failure Type: 1 = Intact Material Failure; 2 = Discontinuity Failure; 3 = Intact Material and Discontinuity Failure (See attached photographs)

1: Best effort end preparation. See Tolerance report for details.
2: The as-received core did not meet the ASTM side straightness tolerance due to irregularities in the sample as cored.
3: Specimen L/D < 2.
4: The as-received core did not meet the ASTM minimum diameter tolerance of 1.875 inches.
5: Specimen diameter is less than 10 times maximum particle size.
6: Specimen diameter is less than 6 times maximum particle size.

*Because the indicated tested specimens did not meet the ASTM D4543 standard tolerances, the results reported here may differ from those for a test specimen within tolerances.

Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	HAGP105-C1	Sample Type:	cylinder	Tested By:	tlm
Sample ID:	---	Test Date:	02/10/21	Checked By:	smd
Depth :	110.4-111.8	Test Id:	608703		
Test Comment:	---				
Visual Description:	See photograph(s)				
Sample Comment:	---				

Bulk Density and Compressive Strength of Rock Core Specimens by ASTM D7012 Method C

Boring ID	Sample Number	Depth	Bulk Density, pcf	Compressive strength, psi	Failure Type	Meets ASTM D4543	Note(s)
HAGP105-C1	---	110.51-111.20 ft	161	11492	1	No	1 , 2,*

Notes: Density determined on core samples by measuring dimensions and weight and then calculating.

All specimens tested at the approximate as-received moisture content and at standard laboratory temperature.

The axial load was applied continuously at a stress rate that produced failure in a test time between 2 and 15 minutes.

Failure Type: 1 = Intact Material Failure; 2 = Discontinuity Failure; 3 = Intact Material and Discontinuity Failure (See attached photographs)

1: Best effort end preparation. See Tolerance report for details.
2: The as-received core did not meet the ASTM side straightness tolerance due to irregularities in the sample as cored.
3: Specimen L/D < 2.
4: The as-received core did not meet the ASTM minimum diameter tolerance of 1.875 inches.
5: Specimen diameter is less than 10 times maximum particle size.
6: Specimen diameter is less than 6 times maximum particle size.

*Because the indicated tested specimens did not meet the ASTM D4543 standard tolerances, the results reported here may differ from those for a test specimen within tolerances.

GeoTesting EXPRESS	Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
	Project Name:	Nuclear Metals, Inc	Tested By:	kdp
	Project Location:	Concord, MA	Checked By:	smd
	GTX #:	312539		
	Boring ID:	HA20-CMT-1-C2		
	Sample ID:	---		
	Depth:	80.68-81.36 ft		
	Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average	
Specimen Length, in:	7.78	7.78	7.78	
Specimen Diameter, in:	3.32	3.32	3.32	
Specimen Mass, g:	3183			
Bulk Density, lb/ft^3	180	**Minimum Diameter Tolerence Met?**		YES
Length to Diameter Ratio:	2.3	**Length to Diameter Ratio Tolerance Met?**		YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:
Is the maximum gap $\leq$ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.01060	0.00900	0.00790	0.00680	0.00540	0.00320	0.00160	0.00000	-0.00170	-0.00370	-0.00550	-0.00710	-0.00840	-0.01010	-0.01180
Diameter 2, in (rotated 90°)	0.00280	0.00220	0.00200	0.00190	0.00120	0.00100	0.00040	0.00000	-0.00070	-0.00100	-0.00150	-0.00180	-0.00220	-0.00250	-0.00310

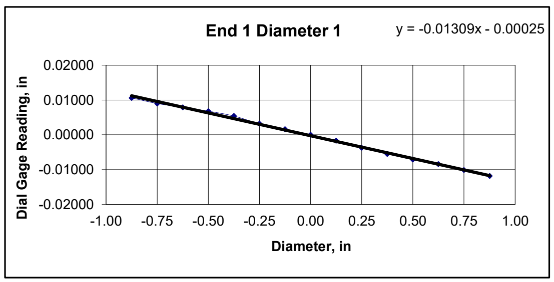
Difference between max and min readings, in:
0° = 0.02240 90° = 0.00590

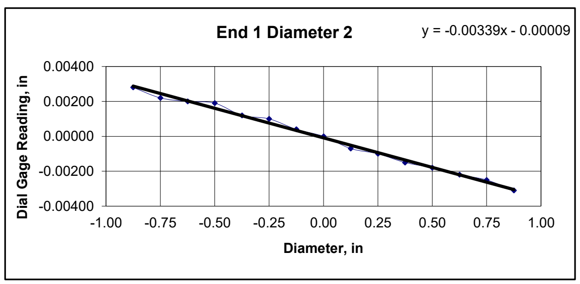
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.01170	0.00960	0.00820	0.00730	0.00540	0.00380	0.00190	0.00000	-0.00200	-0.00380	-0.00530	-0.00670	-0.00790	-0.00940	-0.01150
Diameter 2, in (rotated 90°)	-0.00320	-0.00240	-0.00210	-0.00180	-0.00140	-0.00090	-0.00060	0.00000	0.00020	0.00100	0.00140	0.00180	0.00210	0.00250	0.00310

Difference between max and min readings, in:
0° = 0.0232 90° = 0.0063

Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.01160

Flatness Tolerance Met? NO

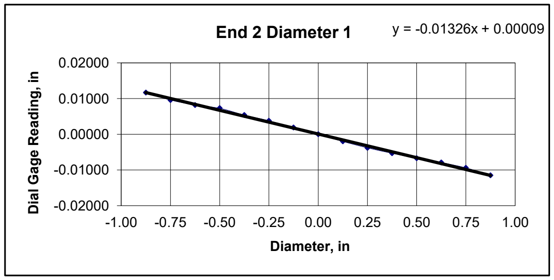


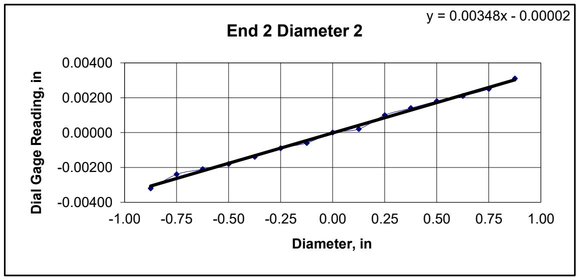


DIAMETER 1

End 1:		
	Slope of Best Fit Line	0.01309
	Angle of Best Fit Line:	0.75020
End 2:		
	Slope of Best Fit Line	0.01326
	Angle of Best Fit Line:	0.75970
Maximum Angular Difference:		0.00949

Parallelism Tolerance Met? NO
Spherically Seated





DIAMETER 2

End 1:		
	Slope of Best Fit Line	0.00339
	Angle of Best Fit Line:	0.19399
End 2:		
	Slope of Best Fit Line	0.00348
	Angle of Best Fit Line:	0.19955
Maximum Angular Difference:		0.00557

Parallelism Tolerance Met? NO
Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.02240	3.320	0.00675	0.387	NO
Diameter 2, in (rotated 90°)	0.00590	3.320	0.00178	0.102	YES
END 2					
Diameter 1, in	0.02320	3.320	0.00699	0.400	NO
Diameter 2, in (rotated 90°)	0.00630	3.320	0.00190	0.109	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? NO

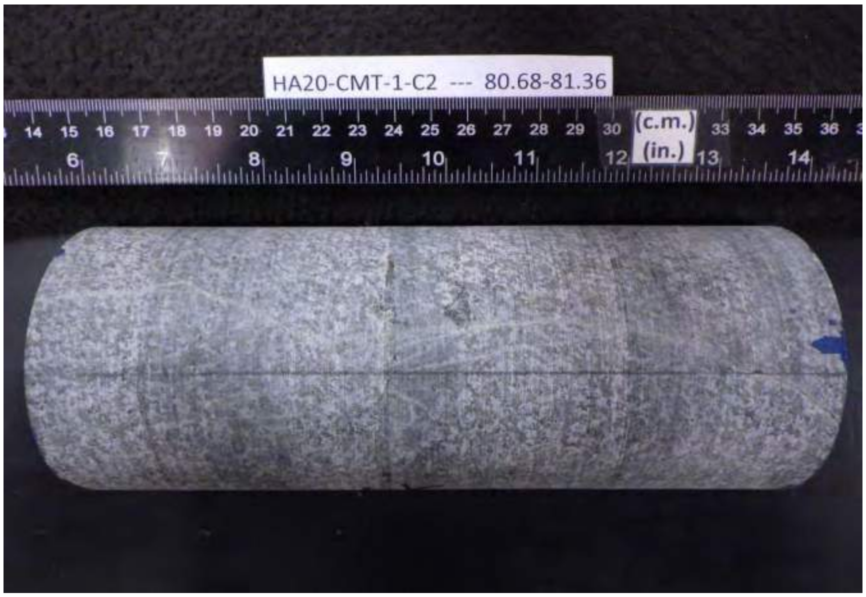
Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-1-C2	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	80.68-81.36		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

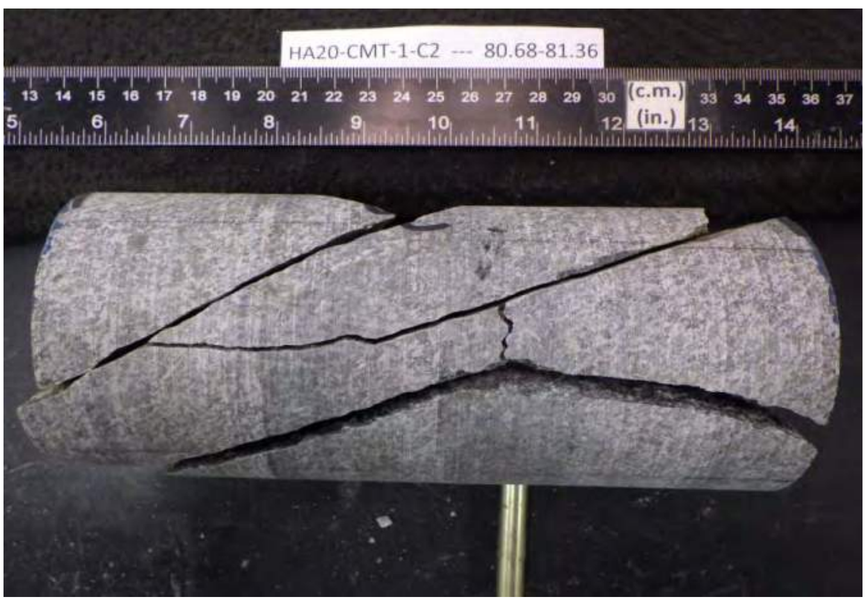
END FLATNESS		
END 1		
Diameter 1	Is the maximum gap $\leq \pm$0.001 in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm$0.001 in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm$0.001 in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm$0.001 in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-1-C2
Sample ID:	---
Depth, ft:	80.68-81.36



After cutting and grinding



After break

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-1-C4		
Sample ID:	---		
Depth:	89.90-90.59 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.96	7.96	7.96
Specimen Diameter, in:	3.32	3.32	3.32
Specimen Mass, g:	3195.1		
Bulk Density, lb/ft^3	176	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.4	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:
Is the maximum gap ≤ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00730	-0.00610	-0.00520	-0.00420	-0.00280	-0.00200	-0.00070	0.00000	0.00070	0.00190	0.00310	0.00420	0.00560	0.00670	0.00830
Diameter 2, in (rotated 90°)	-0.00670	-0.00600	-0.00440	-0.00370	-0.00230	-0.00150	-0.00090	0.00000	0.00120	0.00260	0.00320	0.00400	0.00520	0.00660	0.00770

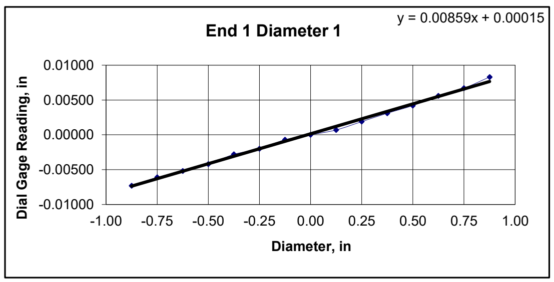
Difference between max and min readings, in:
0° = 0.01560 90° = 0.01440

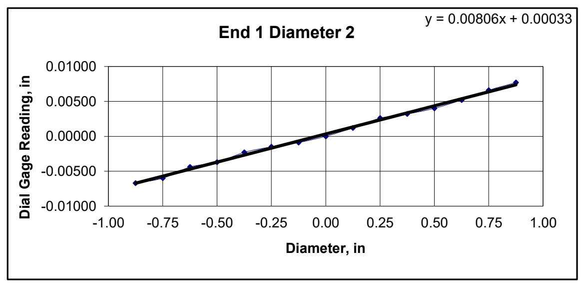
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00790	-0.00690	-0.00580	-0.00500	-0.00300	-0.00190	-0.00080	0.00000	0.00140	0.00290	0.00380	0.00490	0.00570	0.00700	0.00880
Diameter 2, in (rotated 90°)	0.00640	0.00550	0.00460	0.00370	0.00280	0.00220	0.00120	0.00000	-0.00070	-0.00160	-0.00280	-0.00380	-0.00440	-0.00550	-0.00700

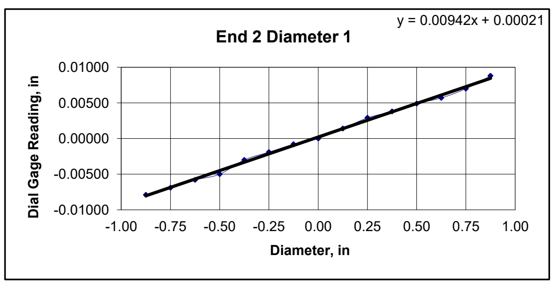
Difference between max and min readings, in:
0° = 0.0167 90° = 0.0134

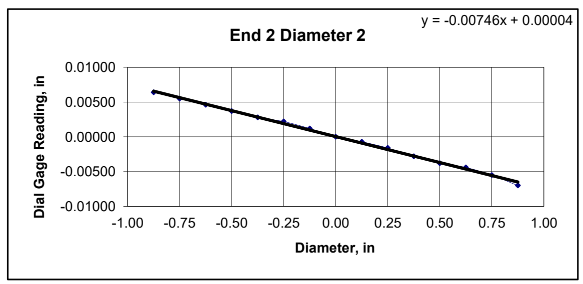
Maximum difference must be < 0.0020 in. Difference = ± 0.00835

Flatness Tolerance Met? NO









DIAMETER 1

End 1:		
	Slope of Best Fit Line	0.00859
	Angle of Best Fit Line:	0.49191
End 2:		
	Slope of Best Fit Line	0.00942
	Angle of Best Fit Line:	0.53955
Maximum Angular Difference:		0.04763

Parallelism Tolerance Met? NO
Spherically Seated

DIAMETER 2

End 1:		
	Slope of Best Fit Line	0.00806
	Angle of Best Fit Line:	0.46163
End 2:		
	Slope of Best Fit Line	0.00746
	Angle of Best Fit Line:	0.42742
Maximum Angular Difference:		0.03421

Parallelism Tolerance Met? NO
Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.01560	3.320	0.00470	0.269	NO
Diameter 2, in (rotated 90°)	0.01440	3.320	0.00434	0.249	YES
END 2					
Diameter 1, in	0.01670	3.320	0.00503	0.288	NO
Diameter 2, in (rotated 90°)	0.01340	3.320	0.00404	0.231	YES

Maximum angle of departure must be ≤ 0.25°

Perpendicularity Tolerance Met? NO

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-1-C4	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	89.90-90.59		
Visual Description:	See photographs		

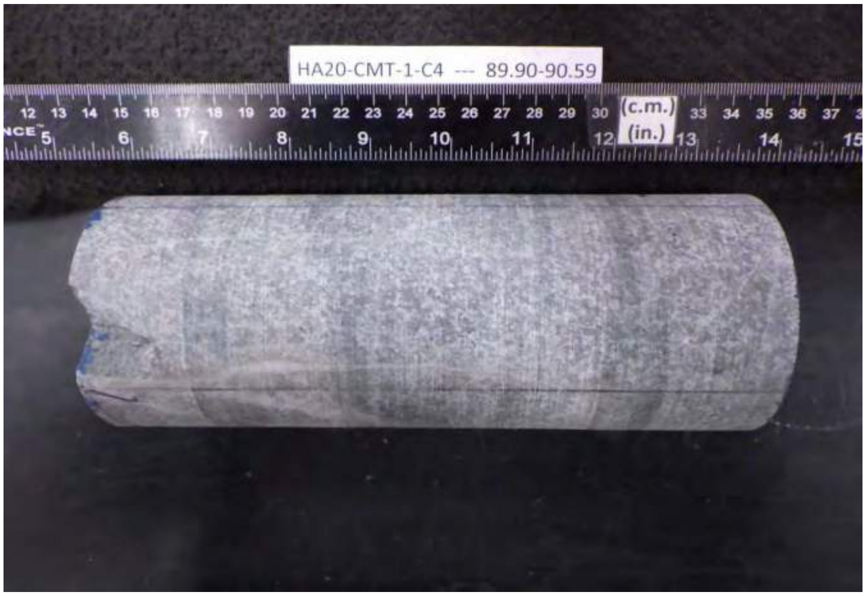
BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

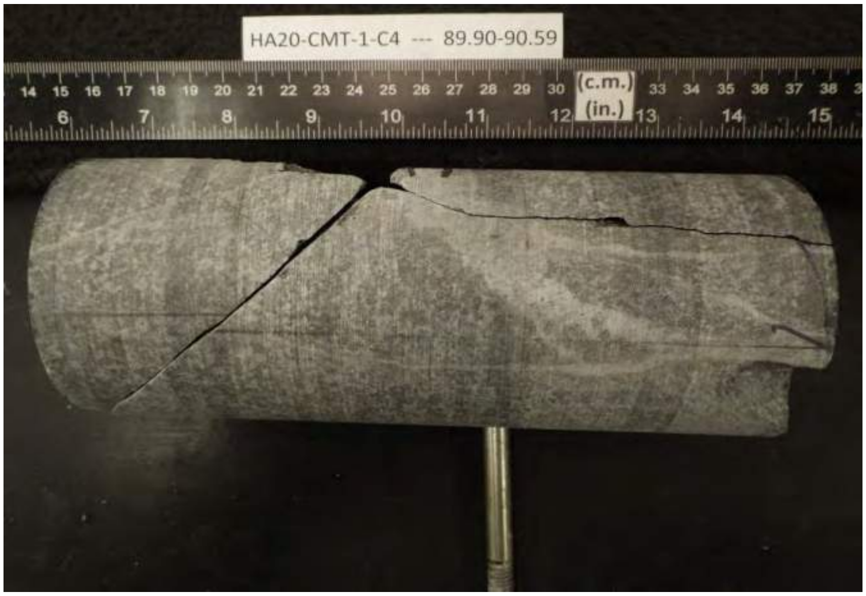
END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-1-C4
Sample ID:	---
Depth, ft:	89.90-90.59



After cutting and grinding



After break

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-2-C1		
Sample ID:	---		
Depth:	90.60-91.27 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.72	7.73	7.73
Specimen Diameter, in:	3.33	3.33	3.33
Specimen Mass, g:	2936.3		
Bulk Density, lb/ft^3	166	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.3	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:

Is the maximum gap $\leq$ 0.02 in.? NO

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? NO

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00780	0.00690	0.00540	0.00490	0.00390	0.00310	0.00200	0.00000	-0.00130	-0.00200	-0.00280	-0.00430	-0.00520	-0.00670	-0.00820
Diameter 2, in (rotated 90°)	0.01650	0.01400	0.01230	0.01120	0.00860	0.00560	0.00290	0.00000	-0.00250	-0.00520	-0.00800	-0.00960	-0.01140	-0.01400	-0.01710

Difference between max and min readings, in:

0° = 0.01600 90° = 0.03360

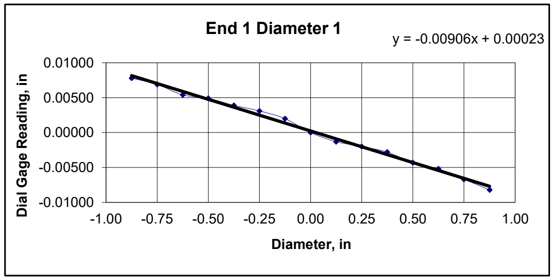
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00750	0.00640	0.00550	0.00470	0.00350	0.00210	0.00090	0.00000	-0.00140	-0.00270	-0.00370	-0.00460	-0.00590	-0.00700	-0.00850
Diameter 2, in (rotated 90°)	-0.01560	-0.01400	-0.01170	-0.01050	-0.00620	-0.00410	-0.00260	0.00000	0.00350	0.00630	0.00920	0.01110	0.01440	0.01640	0.01830

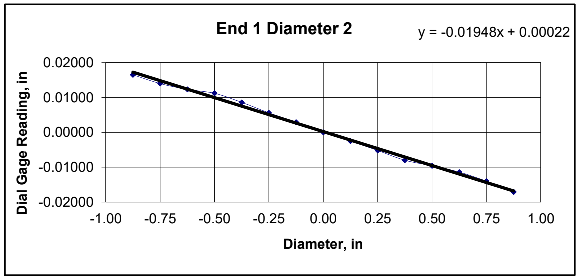
Difference between max and min readings, in:

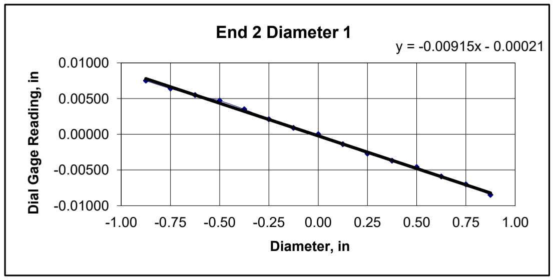
0° = 0.016 90° = 0.0339

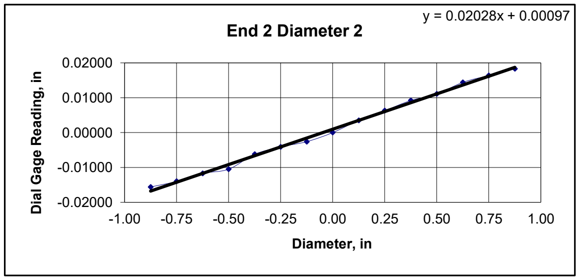
Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.01695

Flatness Tolerance Met? NO









DIAMETER 1

End 1:

Slope of Best Fit Line	0.00906
Angle of Best Fit Line:	0.51892

End 2:

Slope of Best Fit Line	0.00915
Angle of Best Fit Line:	0.52400

Maximum Angular Difference: 0.00507

Parallelism Tolerance Met? NO

Spherically Seated

DIAMETER 2

End 1:

Slope of Best Fit Line	0.01948
Angle of Best Fit Line:	1.11582

End 2:

Slope of Best Fit Line	0.02028
Angle of Best Fit Line:	1.16164

Maximum Angular Difference: 0.04582

Parallelism Tolerance Met? NO

Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.01600	3.330	0.00480	0.275	NO
Diameter 2, in (rotated 90°)	0.03360	3.330	0.01009	0.578	NO
END 2					
Diameter 1, in	0.01600	3.330	0.00480	0.275	NO
Diameter 2, in (rotated 90°)	0.03390	3.330	0.01018	0.583	NO

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? NO

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-2-C1	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	90.60-91.27		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-2-C1
Sample ID:	---
Depth, ft:	90.60-91.27

After cutting and grinding

After break

GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-2-C2		
Sample ID:	---		
Depth:	94.46-95.14 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.66	7.66	7.66
Specimen Diameter, in:	3.33	3.33	3.33
Specimen Mass, g:	3081.7		
Bulk Density, lb/ft^3	176	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.3	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:

Is the maximum gap $\leq$ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00050	0.00040	0.00030	0.00030	0.00020	0.00020	0.00010	0.00000	-0.00010	-0.00020	-0.00040	-0.00040	-0.00050	-0.00060	-0.00080
Diameter 2, in (rotated 90^o)	-0.00290	-0.00250	-0.00230	-0.00200	-0.00130	-0.00080	-0.00050	0.00000	0.00060	0.00090	0.00120	0.00180	0.00230	0.00270	0.00320

Difference between max and min readings, in:

0° = 0.00130 90° = 0.00610

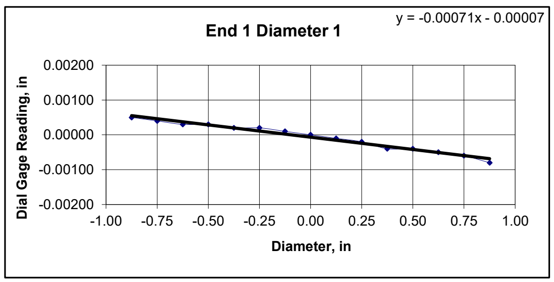
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00060	0.00040	0.00040	0.00030	0.00030	0.00020	0.00010	0.00000	0.00000	0.00000	-0.00010	-0.00020	-0.00040	-0.00050	-0.00070
Diameter 2, in (rotated 90^o)	0.00340	0.00300	0.00270	0.00250	0.00150	0.00100	0.00050	0.00000	-0.00060	-0.00110	-0.00160	-0.00210	-0.00270	-0.00330	-0.00380

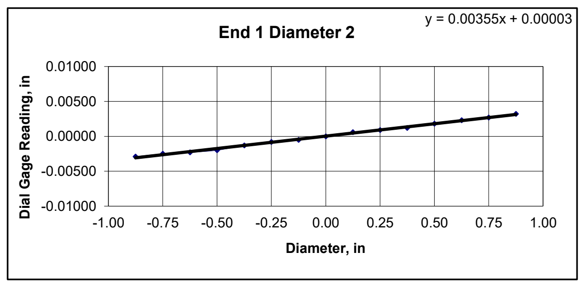
Difference between max and min readings, in:

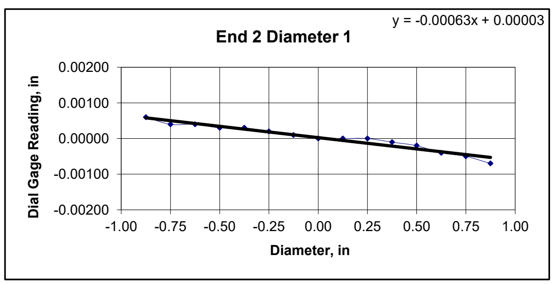
0° = 0.0013 90° = 0.0072

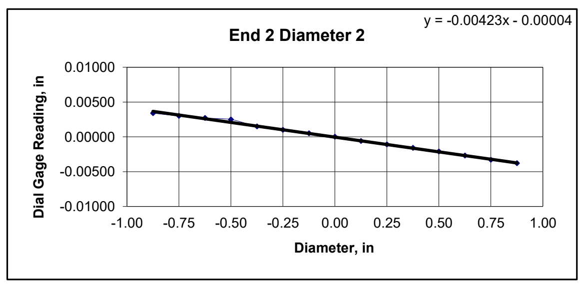
Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.00360

Flatness Tolerance Met? NO









DIAMETER 1

End 1:

Slope of Best Fit Line	0.00071
Angle of Best Fit Line:	0.04043

End 2:

Slope of Best Fit Line	0.00063
Angle of Best Fit Line:	0.03634

Maximum Angular Difference: 0.00409

Parallelism Tolerance Met? YES

Spherically Seated

DIAMETER 2

End 1:

Slope of Best Fit Line	0.00355
Angle of Best Fit Line:	0.20315

End 2:

Slope of Best Fit Line	0.00423
Angle of Best Fit Line:	0.24261

Maximum Angular Difference: 0.03945

Parallelism Tolerance Met? NO

Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00130	3.330	0.00039	0.022	YES
Diameter 2, in (rotated 90^o)	0.00610	3.330	0.00183	0.105	YES
END 2					
Diameter 1, in	0.00130	3.330	0.00039	0.022	YES
Diameter 2, in (rotated 90^o)	0.00720	3.330	0.00216	0.124	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? YES

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-2-C2	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	94.46-95.14		
Visual Description:	See photographs		

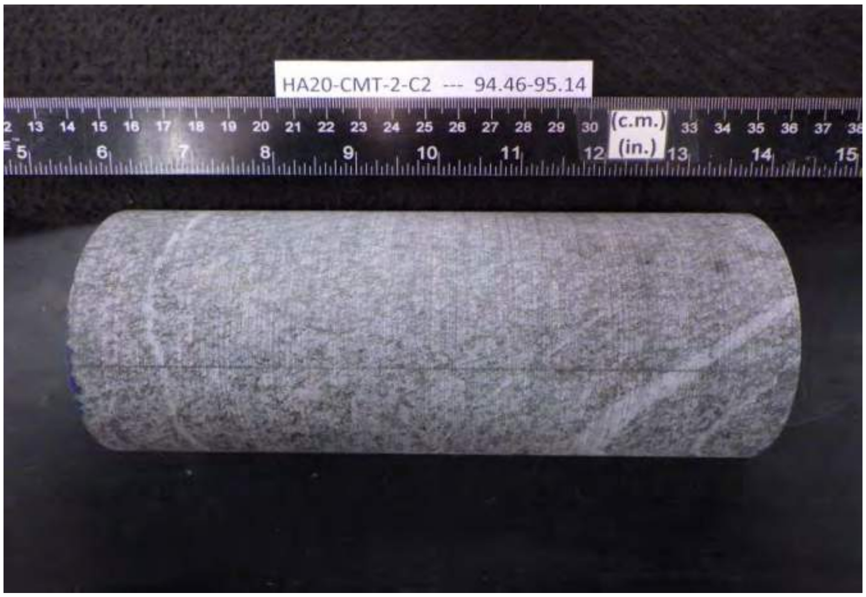
BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-2-C2
Sample ID:	---
Depth, ft:	94.46-95.14



After cutting and grinding

After break

GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-2-C4		
Sample ID:	---		
Depth:	103.31-103.95 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average		
Specimen Length, in:	7.47	7.47	7.47		
Specimen Diameter, in:	3.32	3.32	3.32		
Specimen Mass, g:	2839				
Bulk Density, lb/ft^3	167			**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.3			**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:
Is the maximum gap $\leq$ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00130	-0.00100	-0.00090	-0.00060	-0.00030	-0.00020	-0.00010	0.00000	0.00030	0.00050	0.00060	0.00080	0.00090	0.00130	0.00150
Diameter 2, in (rotated 90°)	0.00080	0.00070	0.00060	0.00060	0.00050	0.00020	0.00010	0.00000	-0.00010	-0.00020	-0.00060	-0.00070	-0.00090	-0.00100	-0.00120

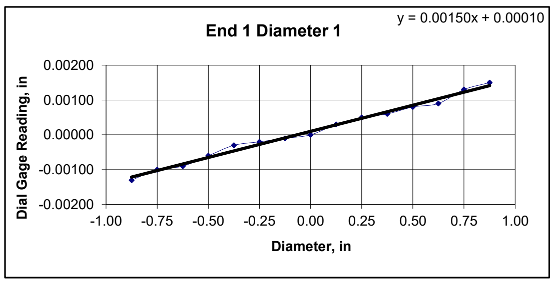
Difference between max and min readings, in:
0° = 0.00280 90° = 0.00200

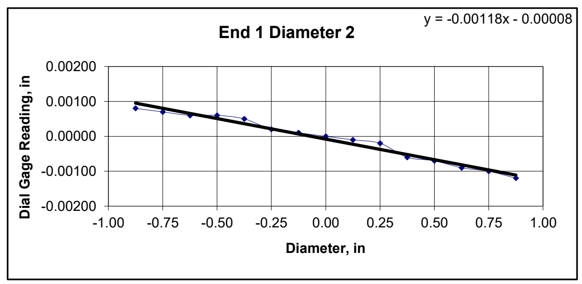
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00130	-0.00100	-0.00080	-0.00070	-0.00060	-0.00040	-0.00010	0.00000	0.00020	0.00050	0.00060	0.00080	0.00090	0.00110	0.00140
Diameter 2, in (rotated 90°)	-0.00100	-0.00100	-0.00080	-0.00070	-0.00050	-0.00020	-0.00010	0.00000	0.00020	0.00030	0.00050	0.00060	0.00070	0.00080	0.00100

Difference between max and min readings, in:
0° = 0.0027 90° = 0.002

Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.00140

Flatness Tolerance Met? NO





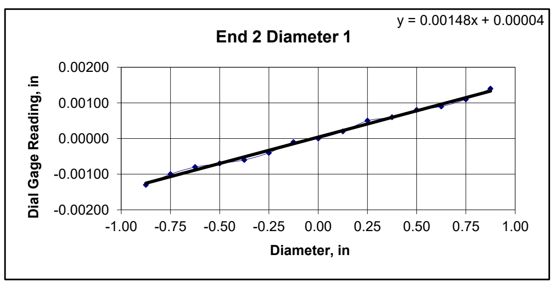
DIAMETER 1

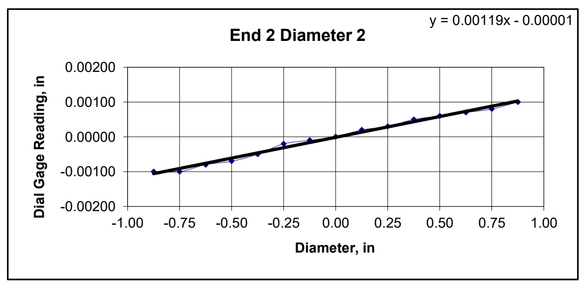
End 1:
Slope of Best Fit Line 0.00150
Angle of Best Fit Line: 0.08594

End 2:
Slope of Best Fit Line 0.00148
Angle of Best Fit Line: 0.08463

Maximum Angular Difference: 0.00131

Parallelism Tolerance Met? YES
Spherically Seated





DIAMETER 2

End 1:
Slope of Best Fit Line 0.00118
Angle of Best Fit Line: 0.06745

End 2:
Slope of Best Fit Line 0.00119
Angle of Best Fit Line: 0.06843

Maximum Angular Difference: 0.00098

Parallelism Tolerance Met? YES
Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00280	3.320	0.00084	0.048	YES
Diameter 2, in (rotated 90°)	0.00200	3.320	0.00060	0.035	YES
END 2					
Diameter 1, in	0.00270	3.320	0.00081	0.047	YES
Diameter 2, in (rotated 90°)	0.00200	3.320	0.00060	0.035	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? YES

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-2-C4	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	103.31-103.95		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-2-C4
Sample ID:	---
Depth, ft:	103.31-103.95

After cutting and grinding

After break

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Boring ID:	HA20-CMT-4-C1
Sample ID:	---
Depth:	93.34-94.03 ft
Visual Description:	See photographs

Test Date:	2/8/2021
Tested By:	kdp
Checked By:	smd

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.72	7.72	7.72
Specimen Diameter, in:	3.33	3.33	3.33
Specimen Mass, g:	2977.4		
Bulk Density, lb/ft^3	168	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.3	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:

Is the maximum gap $\leq$ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00260	0.00230	0.00220	0.00180	0.00150	0.00100	0.00060	0.00000	-0.00050	-0.00080	-0.00120	-0.00150	-0.00170	-0.00220	-0.00290
Diameter 2, in (rotated 90°)	0.00160	0.00150	0.00120	0.00100	0.00070	0.00070	0.00050	0.00000	-0.00030	-0.00040	-0.00080	-0.00120	-0.00130	-0.00160	-0.00200

Difference between max and min readings, in:

0° = 0.00550 90° = 0.00360

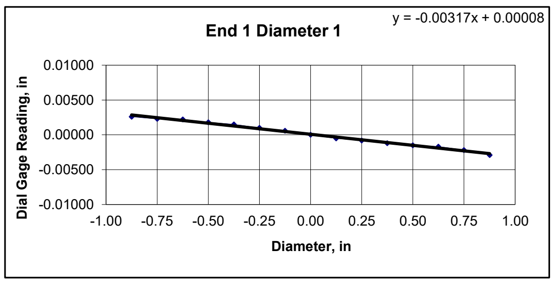
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00270	0.00220	0.00190	0.00140	0.00130	0.00070	0.00050	0.00000	-0.00060	-0.00080	-0.00120	-0.00170	-0.00190	-0.00230	-0.00300
Diameter 2, in (rotated 90°)	-0.00160	-0.00140	-0.00120	-0.00100	-0.00050	-0.00030	-0.00020	0.00000	0.00030	0.00050	0.00090	0.00120	0.00150	0.00190	0.00210

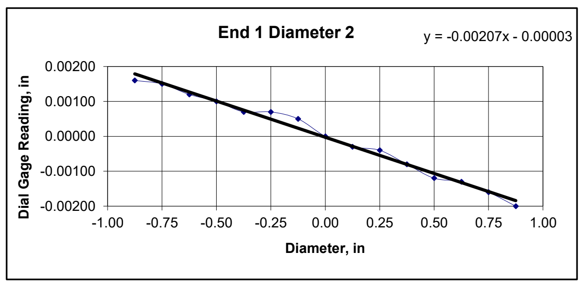
Difference between max and min readings, in:

0° = 0.0057 90° = 0.0037

Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.00285

Flatness Tolerance Met? NO





DIAMETER 1

End 1:

Slope of Best Fit Line	0.00317
Angle of Best Fit Line:	0.18171

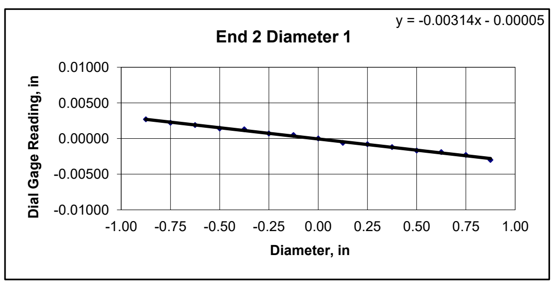
End 2:

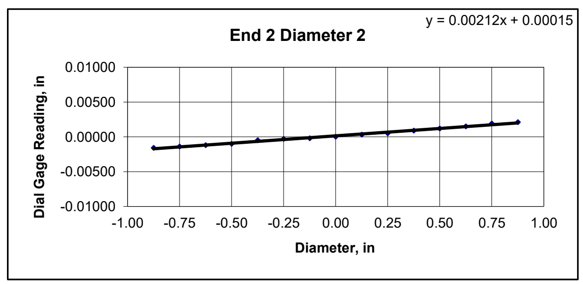
Slope of Best Fit Line	0.00314
Angle of Best Fit Line:	0.17991

Maximum Angular Difference: 0.00180

Parallelism Tolerance Met? YES

Spherically Seated





DIAMETER 2

End 1:

Slope of Best Fit Line	0.00207
Angle of Best Fit Line:	0.11885

End 2:

Slope of Best Fit Line	0.00212
Angle of Best Fit Line:	0.12163

Maximum Angular Difference: 0.00278

Parallelism Tolerance Met? YES

Spherically Seated

PERPENDICULARITY (Procedure P1)

(Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00550	3.330	0.00165	0.095	YES
Diameter 2, in (rotated 90°)	0.00360	3.330	0.00108	0.062	YES
END 2					
Diameter 1, in	0.00570	3.330	0.00171	0.098	YES
Diameter 2, in (rotated 90°)	0.00370	3.330	0.00111	0.064	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? YES

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-4-C1	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	93.34-94.03		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

END 1

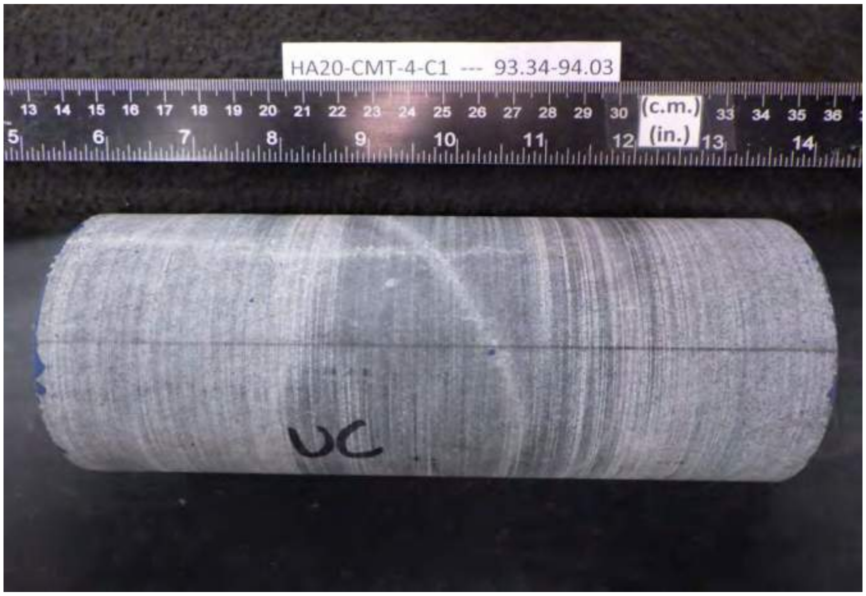
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES

END 2

Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-4-C1
Sample ID:	---
Depth, ft:	93.34-94.03



After cutting and grinding

After break

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-4-C2		
Sample ID:	---		
Depth:	98.61-99.26 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.31	7.31	7.31
Specimen Diameter, in:	3.33	3.33	3.33
Specimen Mass, g:	2885.4		
Bulk Density, lb/ft^3	172	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.2	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:

Is the maximum gap ≤ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00650	-0.00540	-0.00460	-0.00400	-0.00310	-0.00240	-0.00120	0.00000	0.00110	0.00200	0.00280	0.00360	0.00450	0.00590	0.00710
Diameter 2, in (rotated 90^o)	-0.00620	-0.00540	-0.00450	-0.00410	-0.00300	-0.00220	-0.00140	0.00000	0.00070	0.00130	0.00250	0.00350	0.00440	0.00540	0.00670

Difference between max and min readings, in:

0° = 0.01360 90° = 0.01290

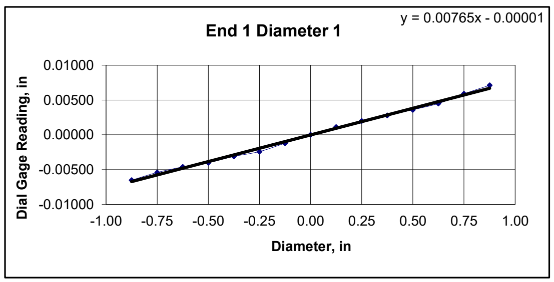
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00680	-0.00590	-0.00510	-0.00460	-0.00340	-0.00240	-0.00110	0.00000	0.00120	0.00210	0.00290	0.00430	0.00540	0.00620	0.00750
Diameter 2, in (rotated 90^o)	0.00690	0.00550	0.00490	0.00450	0.00360	0.00260	0.00150	0.00000	-0.00130	-0.00210	-0.00310	-0.00400	-0.00500	-0.00640	-0.00750

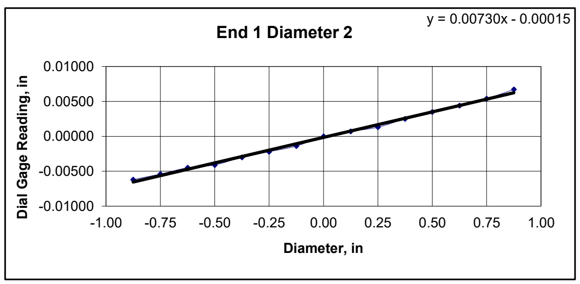
Difference between max and min readings, in:

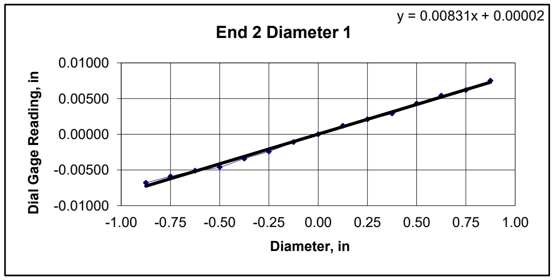
0° = 0.0143 90° = 0.0144

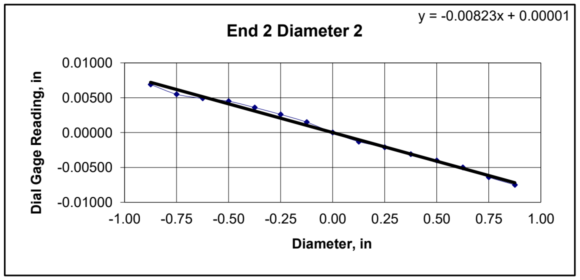
Maximum difference must be < 0.0020 in. Difference = ± 0.00720

Flatness Tolerance Met? NO









DIAMETER 1

End 1:	
Slope of Best Fit Line	0.00765
Angle of Best Fit Line:	0.43822
End 2:	
Slope of Best Fit Line	0.00831
Angle of Best Fit Line:	0.47636
Maximum Angular Difference:	0.03814

Parallelism Tolerance Met? NO

Spherically Seated

DIAMETER 2

End 1:	
Slope of Best Fit Line	0.00730
Angle of Best Fit Line:	0.41842
End 2:	
Slope of Best Fit Line	0.00823
Angle of Best Fit Line:	0.47145
Maximum Angular Difference:	0.05304

Parallelism Tolerance Met? NO

Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.01360	3.330	0.00408	0.234	YES
Diameter 2, in (rotated 90^o)	0.01290	3.330	0.00387	0.222	YES
END 2					
Diameter 1, in	0.01430	3.330	0.00429	0.246	YES
Diameter 2, in (rotated 90^o)	0.01440	3.330	0.00432	0.248	YES

Maximum angle of departure must be ≤ 0.25°

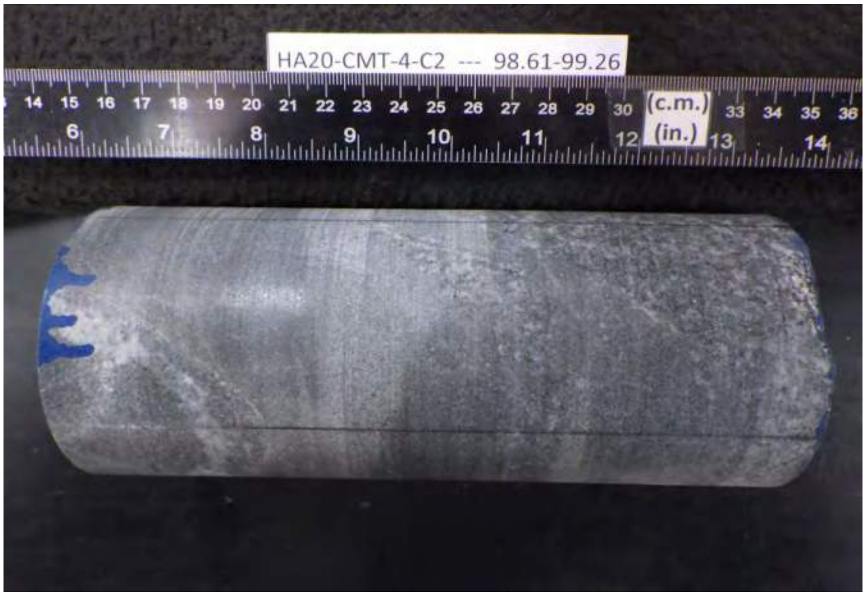
Perpendicularity Tolerance Met? YES

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-4-C2	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	98.61-99.26		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS		
END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90°)	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90°)	Is the maximum gap $\leq \pm 0.001$ in.?	YES
	End Flatness Tolerance Met?	**YES**

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-4-C2
Sample ID:	---
Depth, ft:	98.61-99.26



After cutting and grinding

After break

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-4-C3		
Sample ID:	---		
Depth:	103.17-103.87 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.83	7.83	7.83
Specimen Diameter, in:	3.33	3.33	3.33
Specimen Mass, g:	3093.3		
Bulk Density, lb/ft^3	172	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.4	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:
Is the maximum gap $\leq$ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00170	0.00140	0.00120	0.00100	0.00070	0.00070	0.00020	0.00000	-0.00020	-0.00030	-0.00070	-0.00090	-0.00120	-0.00150	-0.00180
Diameter 2, in (rotated 90°)	-0.00210	-0.00170	-0.00140	-0.00110	-0.00090	-0.00060	-0.00010	0.00000	0.00030	0.00070	0.00100	0.00130	0.00170	0.00210	0.00250

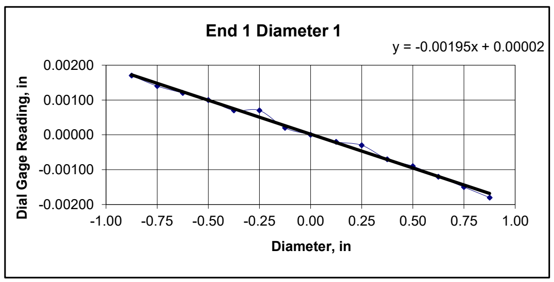
Difference between max and min readings, in:
0° = 0.00350 90° = 0.00460

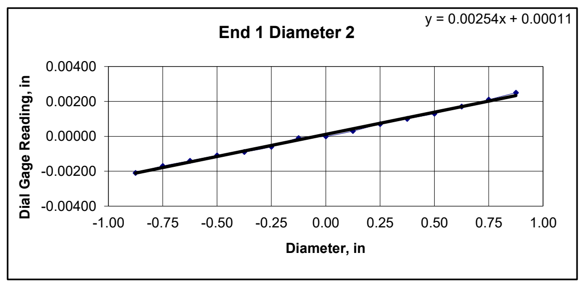
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00170	0.00120	0.00100	0.00090	0.00080	0.00080	0.00030	0.00000	0.00000	-0.00010	-0.00040	-0.00080	-0.00090	-0.00110	-0.00160
Diameter 2, in (rotated 90°)	0.00270	0.00220	0.00180	0.00150	0.00120	0.00090	0.00040	0.00000	-0.00020	-0.00040	-0.00070	-0.00120	-0.00170	-0.00220	-0.00260

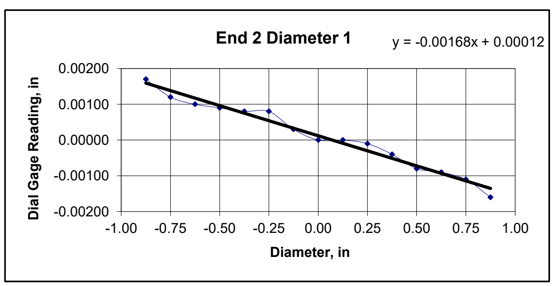
Difference between max and min readings, in:
0° = 0.0033 90° = 0.0053

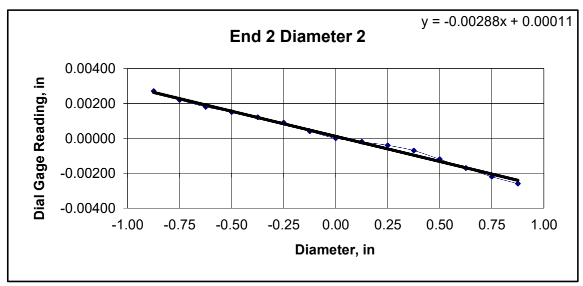
Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.00265

Flatness Tolerance Met? NO









DIAMETER 1

End 1:

Slope of Best Fit Line	0.00195
Angle of Best Fit Line:	0.11148

End 2:

Slope of Best Fit Line	0.00168
Angle of Best Fit Line:	0.09642

Maximum Angular Difference: 0.01506

Parallelism Tolerance Met? NO
Spherically Seated

DIAMETER 2

End 1:

Slope of Best Fit Line	0.00254
Angle of Best Fit Line:	0.14537

End 2:

Slope of Best Fit Line	0.00288
Angle of Best Fit Line:	0.16485

Maximum Angular Difference: 0.01948

Parallelism Tolerance Met? NO
Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00350	3.330	0.00105	0.060	YES
Diameter 2, in (rotated 90°)	0.00460	3.330	0.00138	0.079	YES
END 2					
Diameter 1, in	0.00330	3.330	0.00099	0.057	YES
Diameter 2, in (rotated 90°)	0.00530	3.330	0.00159	0.091	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? YES

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-4-C3	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	103.17-103.87		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

END 1

Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES

END 2

Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-4-C3
Sample ID:	---
Depth, ft:	103.17-103.87

After cutting and grinding

After break

GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-5-C1		
Sample ID:	---		
Depth:	82.31-82.99 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.86	7.85	7.86
Specimen Diameter, in:	3.33	3.33	3.33
Specimen Mass, g:	3189.6		
Bulk Density, lb/ft^3	177	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.4	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:

Is the maximum gap $\leq$ 0.02 in.? NO

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? NO

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.01790	0.01570	0.01390	0.01130	0.00930	0.00690	0.00390	0.00000	-0.00280	-0.00600	-0.00820	-0.01060	-0.01300	-0.01550	-0.01800
Diameter 2, in (rotated 90°)	-0.00310	-0.00260	-0.00210	-0.00190	-0.00130	-0.00080	-0.00030	0.00000	0.00020	0.00080	0.00110	0.00180	0.00220	0.00260	0.00320

Difference between max and min readings, in:

0° = 0.03590 90° = 0.00630

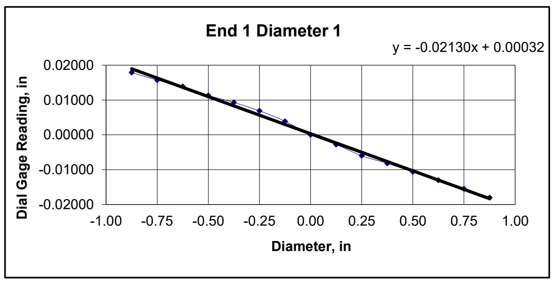
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.01960	0.01640	0.01430	0.01200	0.00930	0.00570	0.00220	0.00000	-0.00330	-0.00540	-0.00810	-0.01150	-0.01410	-0.01700	-0.02030
Diameter 2, in (rotated 90°)	0.00330	0.00270	0.00240	0.00230	0.00210	0.00150	0.00080	0.00000	-0.00040	-0.00110	-0.00190	-0.00240	-0.00270	-0.00330	-0.00380

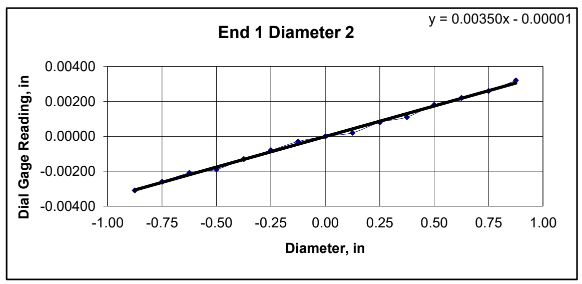
Difference between max and min readings, in:

0° = 0.0399 90° = 0.0071

Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.01995

Flatness Tolerance Met? NO



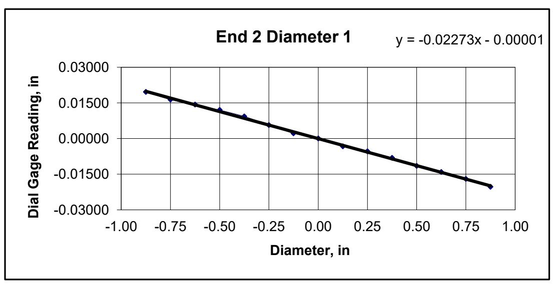


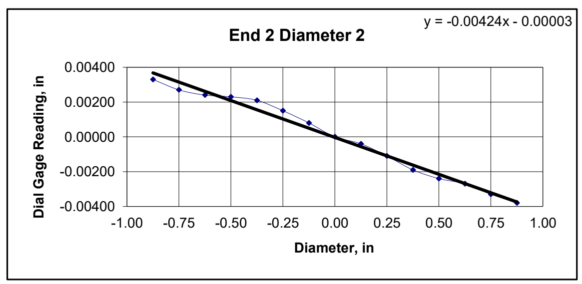
DIAMETER 1

End 1:	Slope of Best Fit Line	0.02130
	Angle of Best Fit Line:	1.22038
End 2:	Slope of Best Fit Line	0.02273
	Angle of Best Fit Line:	1.30219
Maximum Angular Difference:		0.08181

Parallelism Tolerance Met? NO

Spherically Seated





DIAMETER 2

End 1:	Slope of Best Fit Line	0.00350
	Angle of Best Fit Line:	0.20053
End 2:	Slope of Best Fit Line	0.00424
	Angle of Best Fit Line:	0.24293
Maximum Angular Difference:		0.04240

Parallelism Tolerance Met? NO

Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.03590	3.330	0.01078	0.618	NO
Diameter 2, in (rotated 90°)	0.00630	3.330	0.00189	0.108	YES
END 2					
Diameter 1, in	0.03990	3.330	0.01198	0.686	NO
Diameter 2, in (rotated 90°)	0.00710	3.330	0.00213	0.122	YES

Maximum angle of departure must be $\leq$ 0.25°

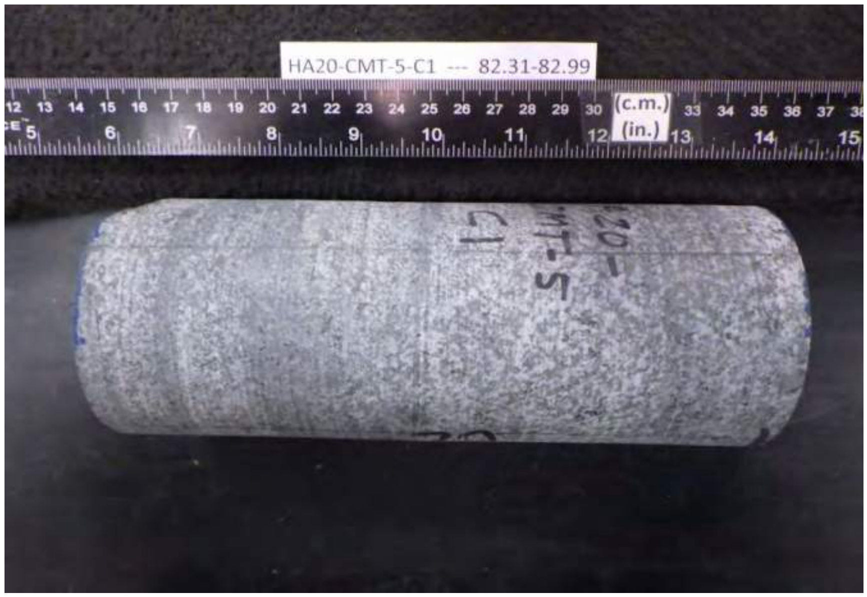
Perpendicularity Tolerance Met? NO

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-5-C1	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	82.31-82.99		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

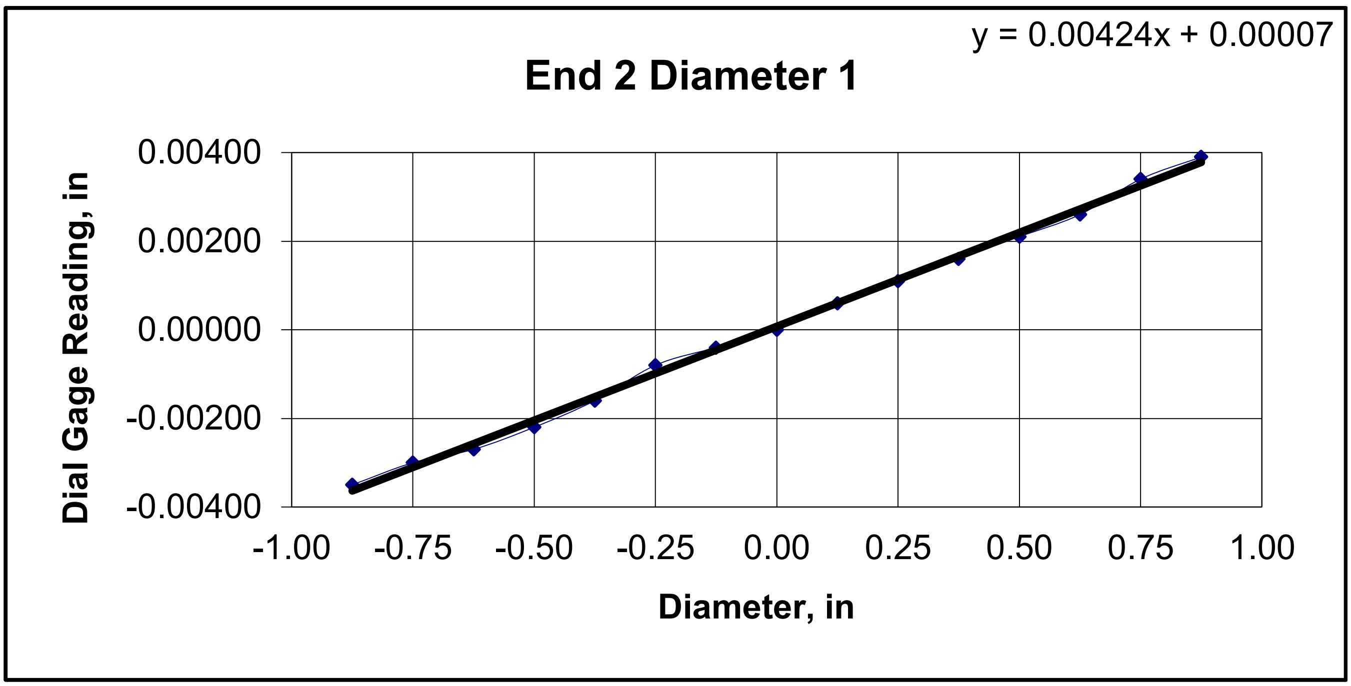
END FLATNESS		
END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES
	End Flatness Tolerance Met?	**YES**

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-5-C1
Sample ID:	---
Depth, ft:	82.31-82.99



After cutting and grinding

After break



y = 0.00424x + 0.00007
End 2 Diameter 1
Dial Gage Reading, in
0.00400
0.00200
0.00000
-0.00200
-0.00400
-1.00
-0.75
-0.50
-0.25
0.00
0.25
0.50
0.75
1.00
Diameter, in

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-5-C2	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	87.50-88.19		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

END 1		
Diameter 1	Is the maximum gap $\leq \pm$0.001 in.?	YES
Diameter 2 (rotated 90°)	Is the maximum gap $\leq \pm$0.001 in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm$0.001 in.?	YES
Diameter 2 (rotated 90°)	Is the maximum gap $\leq \pm$0.001 in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-5-C2
Sample ID:	---
Depth, ft:	87.50-88.19

After cutting and grinding

After break

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-5-C3		
Sample ID:	---		
Depth:	90.09-90.76 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.71	7.71	7.71
Specimen Diameter, in:	3.33	3.33	3.33
Specimen Mass, g:	3140.4		
Bulk Density, lb/ft^3	178	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.3	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:

Is the maximum gap $\leq$ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00150	-0.00110	-0.00100	-0.00090	-0.00040	-0.00030	-0.00010	0.00000	0.00030	0.00060	0.00080	0.00100	0.00120	0.00150	0.00190
Diameter 2, in (rotated 90°)	-0.00130	-0.00110	-0.00100	-0.00090	-0.00070	-0.00050	-0.00020	0.00000	0.00020	0.00040	0.00050	0.00070	0.00090	0.00120	0.00120

Difference between max and min readings, in:

0° = 0.00340 90° = 0.00250

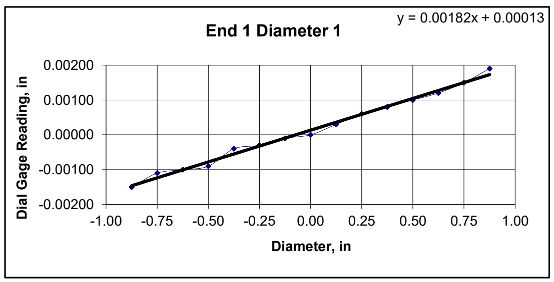
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00190	-0.00170	-0.00150	-0.00120	-0.00070	-0.00050	-0.00010	0.00000	0.00020	0.00040	0.00070	0.00080	0.00100	0.00130	0.00160
Diameter 2, in (rotated 90°)	0.00120	0.00090	0.00090	0.00080	0.00040	0.00030	0.00010	0.00000	-0.00020	-0.00040	-0.00050	-0.00060	-0.00090	-0.00110	-0.00130

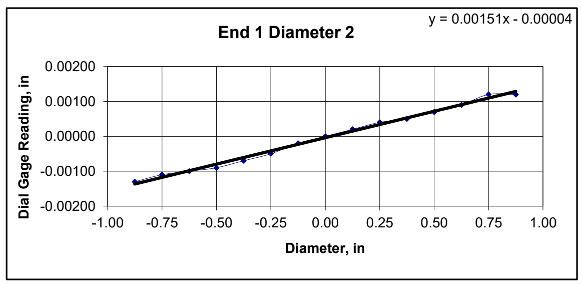
Difference between max and min readings, in:

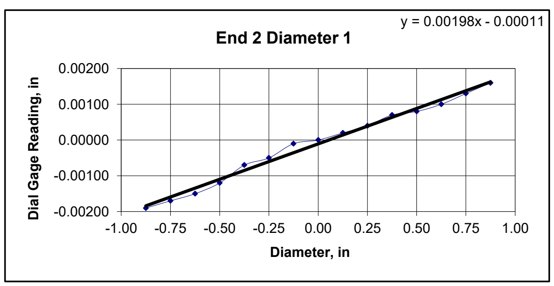
0° = 0.0035 90° = 0.0025

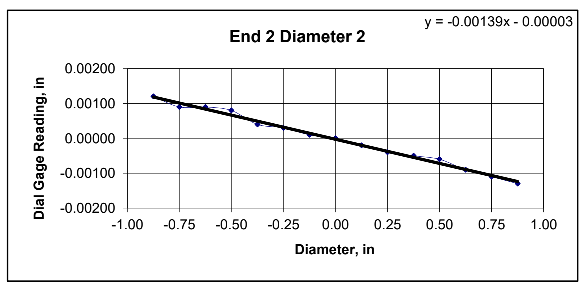
Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.00175

Flatness Tolerance Met? NO









DIAMETER 1

End 1:

Slope of Best Fit Line	0.00182
Angle of Best Fit Line:	0.10444

End 2:

Slope of Best Fit Line	0.00198
Angle of Best Fit Line:	0.11345

Maximum Angular Difference: 0.00900

Parallelism Tolerance Met? NO

Spherically Seated

DIAMETER 2

End 1:

Slope of Best Fit Line	0.00151
Angle of Best Fit Line:	0.08676

End 2:

Slope of Best Fit Line	0.00139
Angle of Best Fit Line:	0.07940

Maximum Angular Difference: 0.00737

Parallelism Tolerance Met? NO

Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00340	3.330	0.00102	0.059	YES
Diameter 2, in (rotated 90°)	0.00250	3.330	0.00075	0.043	YES
END 2					
Diameter 1, in	0.00350	3.330	0.00105	0.060	YES
Diameter 2, in (rotated 90°)	0.00250	3.330	0.00075	0.043	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? YES

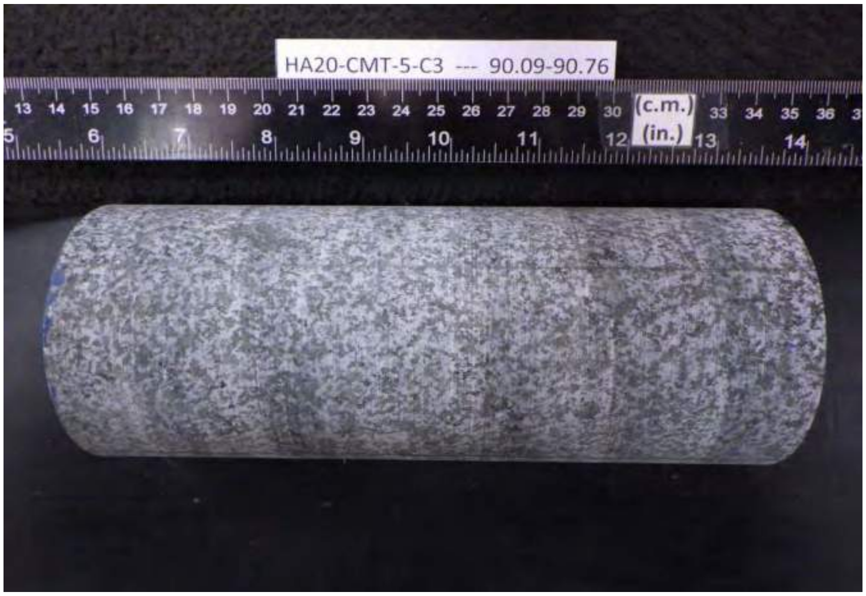
Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HA20-CMT-5-C3	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	90.09-90.76		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS		
END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HA20-CMT-5-C3
Sample ID:	---
Depth, ft:	90.09-90.76



After cutting and grinding

After break

GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HAGP102A-C2		
Sample ID:	---		
Depth:	98.59-99.26 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.58	7.58	7.58
Specimen Diameter, in:	3.33	3.33	3.33
Specimen Mass, g:	3134.9		
Bulk Density, lb/ft^3	181	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.3	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:
Is the maximum gap $\leq$ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00240	-0.00210	-0.00170	-0.00160	-0.00120	-0.00090	-0.00050	0.00000	0.00060	0.00090	0.00130	0.00170	0.00220	0.00270	0.00310
Diameter 2, in (rotated 90°)	-0.00360	-0.00300	-0.00240	-0.00220	-0.00200	-0.00110	-0.00060	0.00000	0.00080	0.00150	0.00210	0.00260	0.00330	0.00380	0.00420

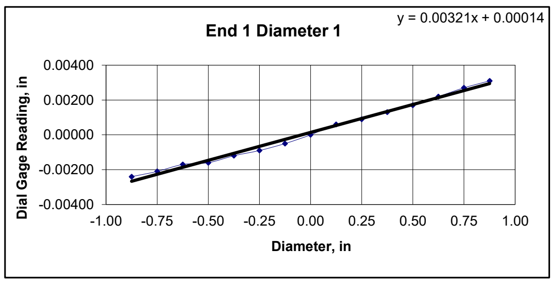
Difference between max and min readings, in:
0° = 0.00550 90° = 0.00780

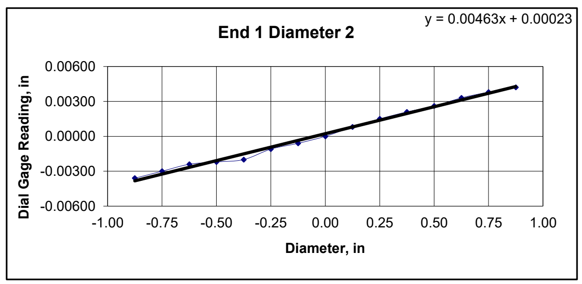
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00260	-0.00220	-0.00190	-0.00160	-0.00100	-0.00070	-0.00030	0.00000	0.00050	0.00090	0.00140	0.00160	0.00210	0.00240	0.00310
Diameter 2, in (rotated 90°)	0.00470	0.00430	0.00340	0.00270	0.00250	0.00150	0.00110	0.00000	-0.00040	-0.00090	-0.00160	-0.00220	-0.00280	-0.00360	-0.00460

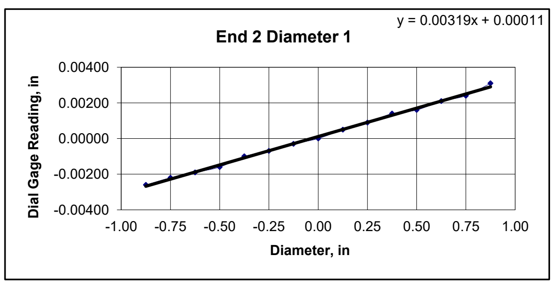
Difference between max and min readings, in:
0° = 0.0057 90° = 0.0093

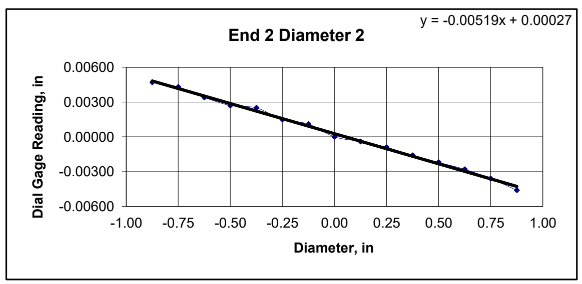
Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.00465

Flatness Tolerance Met? NO









DIAMETER 1

End 1:
Slope of Best Fit Line 0.00321
Angle of Best Fit Line: 0.18367

End 2:
Slope of Best Fit Line 0.00319
Angle of Best Fit Line: 0.18253

Maximum Angular Difference: 0.00115

Parallelism Tolerance Met? YES
Spherically Seated

DIAMETER 2

End 1:
Slope of Best Fit Line 0.00463
Angle of Best Fit Line: 0.26520

End 2:
Slope of Best Fit Line 0.00519
Angle of Best Fit Line: 0.29744

Maximum Angular Difference: 0.03225

Parallelism Tolerance Met? NO
Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00550	3.330	0.00165	0.095	YES
Diameter 2, in (rotated 90°)	0.00780	3.330	0.00234	0.134	YES
END 2					
Diameter 1, in	0.00570	3.330	0.00171	0.098	YES
Diameter 2, in (rotated 90°)	0.00930	3.330	0.00279	0.160	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? YES

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HAGP102A-C2	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	98.59-99.26		
Visual Description:	See photographs		

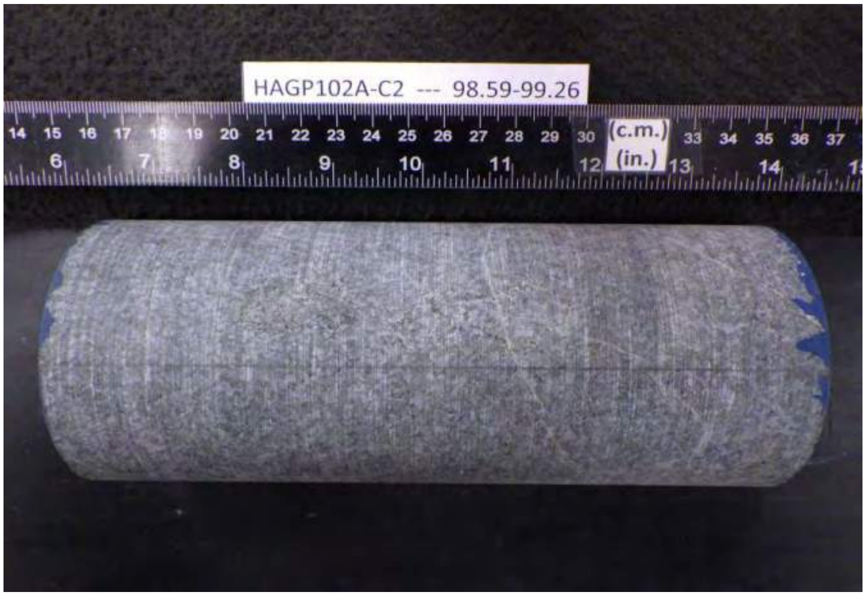
BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HAGP102A-C2
Sample ID:	---
Depth, ft:	98.59-99.26



After cutting and grinding

After break

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HAGP102A-C3		
Sample ID:	---		
Depth:	101.71-102.39 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average		
Specimen Length, in:	7.82	7.82	7.82		
Specimen Diameter, in:	3.33	3.33	3.33		
Specimen Mass, g:	3202.6				
Bulk Density, lb/ft^3	179			**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.3			**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:

Is the maximum gap $\leq$ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00020	0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.00010	-0.00010	-0.00020	-0.00020	-0.00030
Diameter 2, in (rotated 90^o)	-0.00440	-0.00390	-0.00340	-0.00300	-0.00220	-0.00100	-0.00060	0.00000	0.00070	0.00130	0.00210	0.00250	0.00300	0.00350	0.00420

Difference between max and min readings, in:

0° = 0.00050 90° = 0.00860

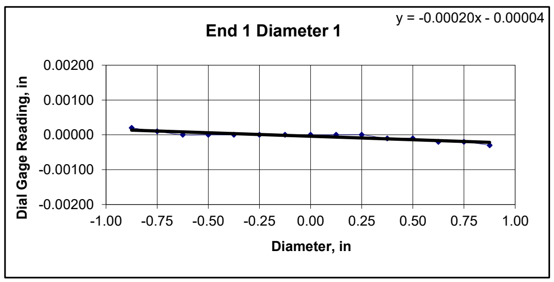
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00020	0.00020	0.00010	0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.00010	-0.00020	-0.00030	-0.00040
Diameter 2, in (rotated 90^o)	0.00460	0.00400	0.00350	0.00280	0.00190	0.00150	0.00080	0.00000	-0.00050	-0.00110	-0.00180	-0.00220	-0.00280	-0.00350	-0.00430

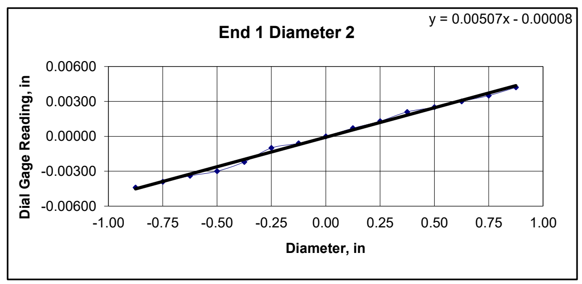
Difference between max and min readings, in:

0° = 0.0006 90° = 0.0089

Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.00445

Flatness Tolerance Met? NO





DIAMETER 1

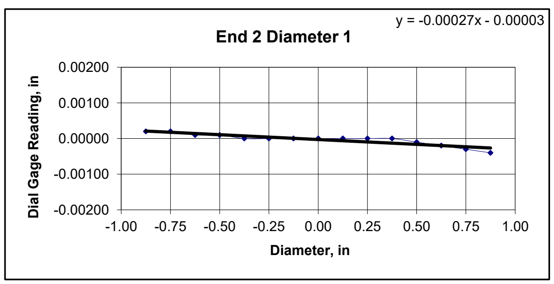
End 1:

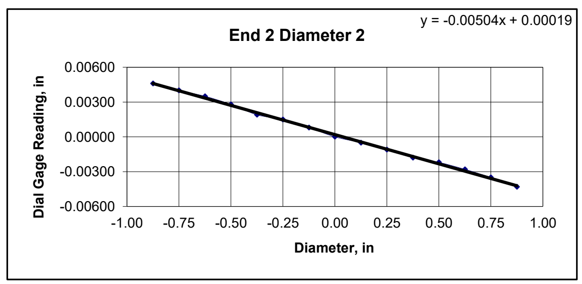
Slope of Best Fit Line	0.00020
Angle of Best Fit Line:	0.01146

End 2:

Slope of Best Fit Line	0.00027
Angle of Best Fit Line:	0.01555
Maximum Angular Difference:	0.00409

Parallelism Tolerance Met? YES
Spherically Seated





DIAMETER 2

End 1:

Slope of Best Fit Line	0.00507
Angle of Best Fit Line:	0.29041

End 2:

Slope of Best Fit Line	0.00504
Angle of Best Fit Line:	0.28877
Maximum Angular Difference:	0.00164

Parallelism Tolerance Met? YES
Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00050	3.330	0.00015	0.009	YES
Diameter 2, in (rotated 90^o)	0.00860	3.330	0.00258	0.148	YES
END 2					
Diameter 1, in	0.00060	3.330	0.00018	0.010	YES
Diameter 2, in (rotated 90^o)	0.00890	3.330	0.00267	0.153	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? YES

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HAGP102A-C3	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	101.71-102.39		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^{o})	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HAGP102A-C3
Sample ID:	---
Depth, ft:	101.71-102.39

After cutting and grinding

After break

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HAGP102A-C4		
Sample ID:	---		
Depth:	108.83-109.47 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average		
Specimen Length, in:	7.46	7.45	7.46		
Specimen Diameter, in:	3.32	3.32	3.32		
Specimen Mass, g:	2754.6				
Bulk Density, lb/ft^3	162			**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.2			**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:
Is the maximum gap $\leq$ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in		0.00120	0.00090	0.00070	0.00060	0.00040	0.00030	0.00000	-0.00010	-0.00020	-0.00040	-0.00060	-0.00090	-0.00120	-0.00140
Diameter 2, in (rotated 90^o)	0.00260	0.00210	0.00190	0.00170	0.00120	0.00080	0.00050	0.00000	-0.00020	-0.00070	-0.00100	-0.00140	-0.00180	-0.00240	-0.00300

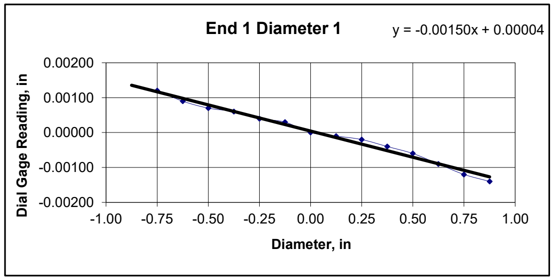
Difference between max and min readings, in:
0° = 0.00260 90° = 0.00560

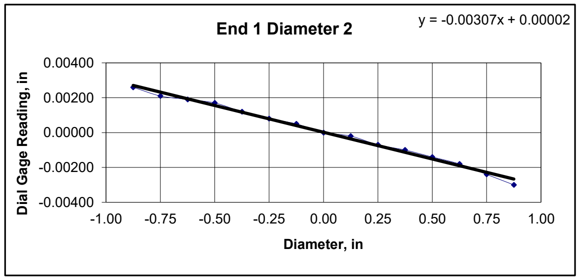
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00150	0.00130	0.00100	0.00090	0.00070	0.00060	0.00030	0.00000	-0.00010	-0.00050	-0.00070	-0.00090	-0.00110	-0.00140	-0.00170
Diameter 2, in (rotated 90^o)	-0.00240	-0.00190	-0.00170	-0.00140	-0.00090	-0.00070	-0.00030	0.00000	0.00040	0.00060	0.00110	0.00130	0.00150	0.00190	0.00220

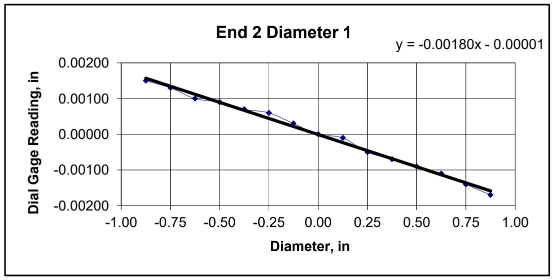
Difference between max and min readings, in:
0° = 0.0032 90° = 0.0046

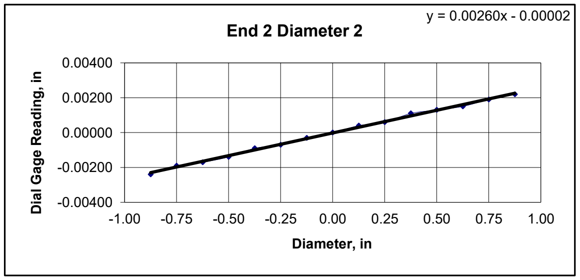
Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.00280

Flatness Tolerance Met? NO









DIAMETER 1

End 1:
Slope of Best Fit Line 0.00150
Angle of Best Fit Line: 0.08593

End 2:
Slope of Best Fit Line 0.00180
Angle of Best Fit Line: 0.10330

Maximum Angular Difference: 0.01736

Parallelism Tolerance Met? NO
Spherically Seated

DIAMETER 2

End 1:
Slope of Best Fit Line 0.00307
Angle of Best Fit Line: 0.17582

End 2:
Slope of Best Fit Line 0.00260
Angle of Best Fit Line: 0.14913

Maximum Angular Difference: 0.02668

Parallelism Tolerance Met? NO
Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00260	3.320	0.00078	0.045	YES
Diameter 2, in (rotated 90^o)	0.00560	3.320	0.00169	0.097	YES
END 2					
Diameter 1, in	0.00320	3.320	0.00096	0.055	YES
Diameter 2, in (rotated 90^o)	0.00460	3.320	0.00139	0.079	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? YES

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HAGP102A-C4	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	108.83-109.47		
Visual Description:	See photographs		

BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS		
END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90^o)	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HAGP102A-C4
Sample ID:	---
Depth, ft:	108.83-109.47

After cutting and grinding

After break

GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HAGP105-C1		
Sample ID:	---		
Depth:	110.51-111.20 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	7.72	7.72	7.72
Specimen Diameter, in:	3.33	3.33	3.33
Specimen Mass, g:	2847.4		
Bulk Density, lb/ft^3	161	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.3	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:
Is the maximum gap $\leq$ 0.02 in.? NO

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? NO

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00860	-0.00750	-0.00620	-0.00550	-0.00460	-0.00200	-0.00090	0.00000	0.00100	0.00220	0.00350	0.00470	0.00590	0.00730	0.00830
Diameter 2, in (rotated 90°)	-0.00470	-0.00410	-0.00340	-0.00320	-0.00250	-0.00160	-0.00070	0.00000	0.00110	0.00190	0.00250	0.00320	0.00380	0.00430	0.00480

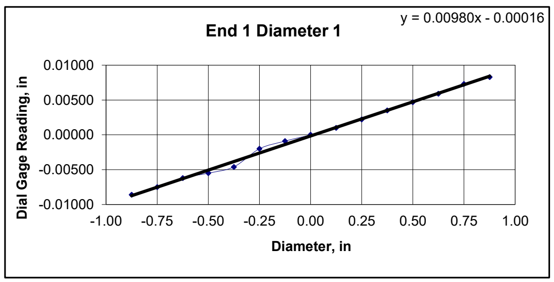
Difference between max and min readings, in:
0° = 0.01690 90° = 0.00950

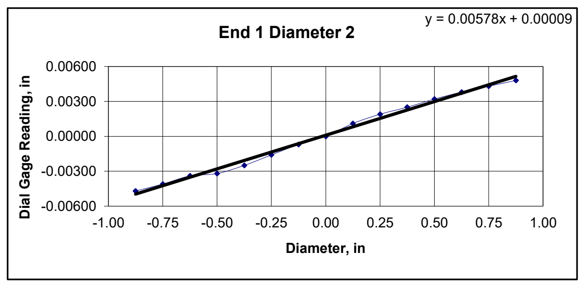
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00830	-0.00670	-0.00580	-0.00480	-0.00360	-0.00240	-0.00120	0.00000	0.00210	0.00290	0.00400	0.00510	0.00600	0.00720	0.00850
Diameter 2, in (rotated 90°)	0.00550	0.00430	0.00370	0.00300	0.00210	0.00150	0.00100	0.00000	-0.00060	-0.00090	-0.00170	-0.00230	-0.00280	-0.00370	-0.00470

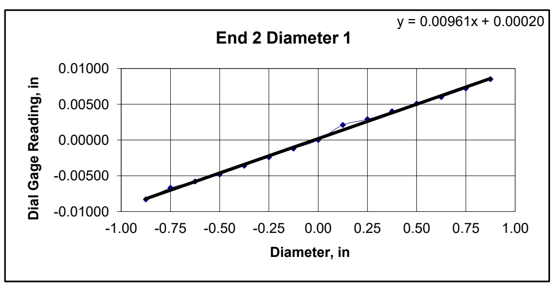
Difference between max and min readings, in:
0° = 0.0168 90° = 0.0102

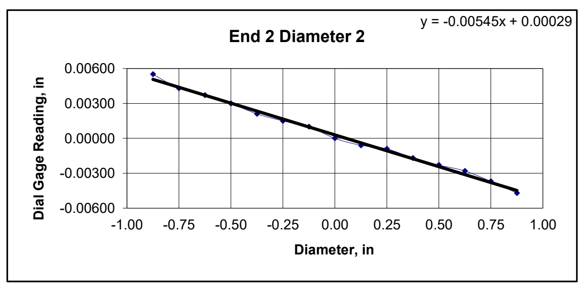
Maximum difference must be < 0.0020 in. Difference = $\pm$ 0.00845

Flatness Tolerance Met? NO









DIAMETER 1

End 1:
Slope of Best Fit Line 0.00980
Angle of Best Fit Line: 0.56148

End 2:
Slope of Best Fit Line 0.00961
Angle of Best Fit Line: 0.55051

Maximum Angular Difference: 0.01097

Parallelism Tolerance Met? NO
Spherically Seated

DIAMETER 2

End 1:
Slope of Best Fit Line 0.00578
Angle of Best Fit Line: 0.33117

End 2:
Slope of Best Fit Line 0.00545
Angle of Best Fit Line: 0.31250

Maximum Angular Difference: 0.01866

Parallelism Tolerance Met? NO
Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.01690	3.330	0.00508	0.291	NO
Diameter 2, in (rotated 90°)	0.00950	3.330	0.00285	0.163	YES
END 2					
Diameter 1, in	0.01680	3.330	0.00505	0.289	NO
Diameter 2, in (rotated 90°)	0.01020	3.330	0.00306	0.176	YES

Maximum angle of departure must be $\leq$ 0.25°

Perpendicularity Tolerance Met? NO

Client:	Haley & Aldrich, Inc.	Test Date:	2/8/2021
Project Name:	Nuclear Metals, Inc	Tested By:	kdp
Project Location:	Concord, MA	Checked By:	smd
GTX #:	312539		
Boring ID:	HAGP105-C1	Reliable dial gauge measurements could not be performed on this rock type. Tolerance measurements were performed using a machinist straightedge and feeler gauges to ASTM specifications.	
Sample ID:	---		
Depth (ft):	110.51-111.20		
Visual Description:	See photographs		

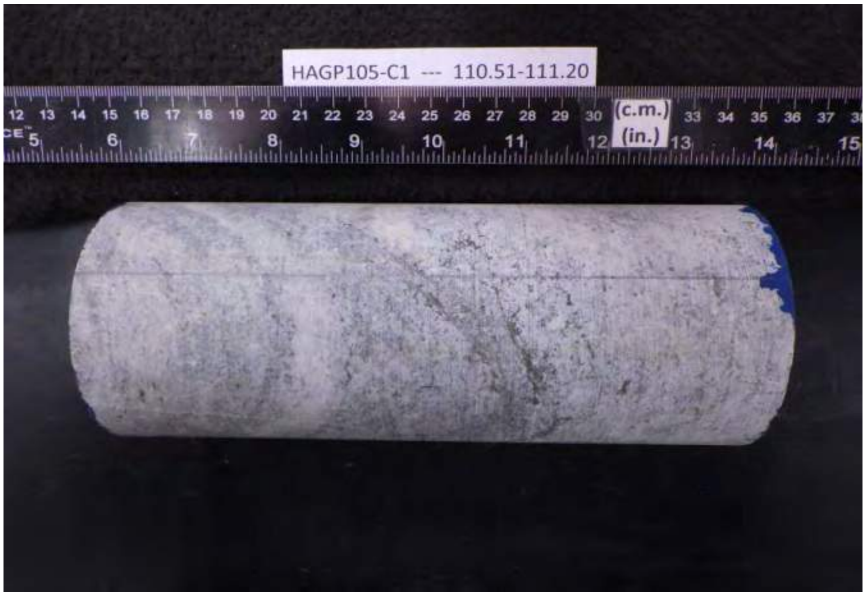
BEST EFFORT END FLATNESS TOLERANCES OF ROCK CORE SPECIMENS TO ASTM D4543

END FLATNESS

END 1		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90°)	Is the maximum gap $\leq \pm 0.001$ in.?	YES
END 2		
Diameter 1	Is the maximum gap $\leq \pm 0.001$ in.?	YES
Diameter 2 (rotated 90°)	Is the maximum gap $\leq \pm 0.001$ in.?	YES

End Flatness Tolerance Met? YES

Client:	Haley & Aldrich, Inc.
Project Name:	Nuclear Metals, Inc
Project Location:	Concord, MA
GTX #:	312539
Test Date:	2/9/2021
Tested By:	cmh
Checked By:	smd
Boring ID:	HAGP105-C1
Sample ID:	---
Depth, ft:	110.51-111.20



After cutting and grinding

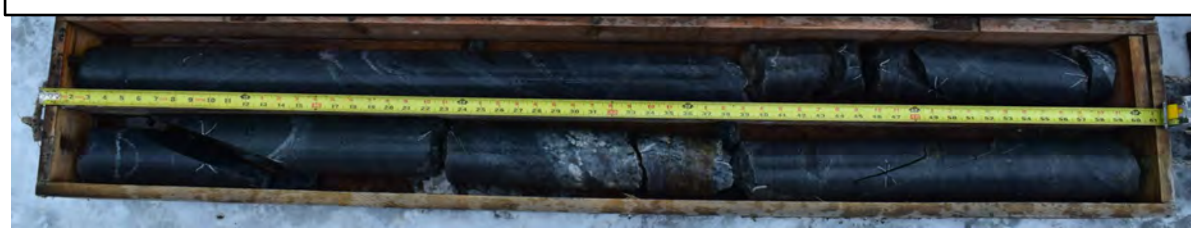
After break

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-1	C1	75.0-80.0	60/60 /100%	47/60 /78%
HA20-CMT-1	C2	80.0-85.0	60/60/ 100%	57/60 /95%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-1	C3	85.0-90.0	57/60 /95%	56/60 /93%
HA20-CMT-1	C4	90.0-94.8	54/58 /93%	54/58 / 93%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-2	C1	90.5-92.3	22/22 /100%	22/22 /100%
HA20-CMT-2	C2	92.3-97.3	57/60 /95%	50/60 /83%

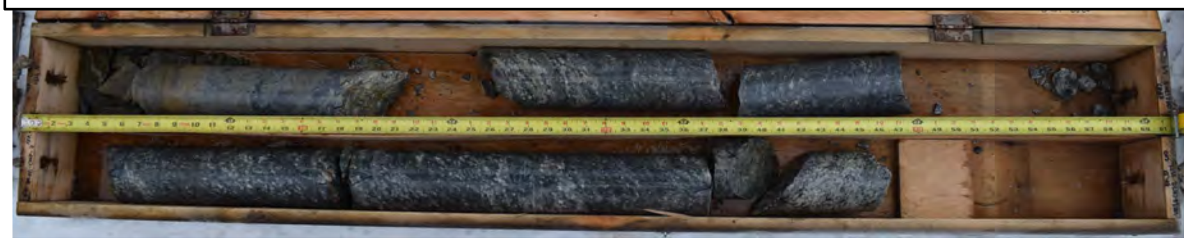
BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-2	C3	97.3-102.3	59/60 /98%	55/60 /92%
HA20-CMT-2	C4	102.3-107.3	60/60 /100%	55/60 /92%



BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-2	C5	107.3-112.0	57/57 /100%	57/57 /100%
HA20-CMT-2	C6	112.0-117.0	55/60 /92%	55/ 92 /92%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-2	C7	117.0-120.0	36/36 /100%	29/36 /81%
HA20-CMT-2	C8	120.0-124.0	48/48 /100%	34/48 /70%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-2	C9	124.0-127.0	36/36 /100%	34/36 /94%
HA20-CMT-2	C10	127.0-130.5	41/41 /100%	41/41 /100%



Photo

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-2	C11	130.5-135.5	60/60 /100%	57/60 /95%
HA20-CMT-2	C12	135.5-136.3	11/11 /100%	11/11 /100%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-3	C1	104.0-108.0	42/48 /88%	28/48 /58%
HA20-CMT-3	C2	108.0-113.0	48/52 /92%	38/52 /73%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-3	C3	112.3-117.3	60/60 /100%	55/60 /92%
HA20-CMT-3	C4	117.3-118.5	15/15 /100%	9/15 /54%
HA20-CMT-	Sonic	118.5-125.0	--	---

*Sonic Drilling HA20-CMT-3 118.5-125.0 Not Logged.

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-3	C5	125.0-127.5	30/30 /100%	30/30 /100%
HA20-CMT-3	C6	127.5–132.5	60/60 /100%	60/60 /100%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-3	C7	132.5-136.5	48/48 /100%	47/48 /98%
HA20-CMT-3	C8	136.5-138.1	19/19 /100%	19/19 /100%
HA20-CMT-3	C9	138.1-142.0	47/47 /100%	47/47 /100%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-3	C10	142.0-147.0	60/60 /100%	59/60 /98%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-4	C1	90.0-95.0	60/60 /100%	58/60 /97%
HA20-CMT-4	C2	95.0-100.0	58/60 /97%	54/60 /90%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-4	C3	100.0-105.0	60/60 /100%	56/60 /93%
HA20-CMT-4	C4	105.0-110.0	60/60 /100%	0/60 /0%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-4	C5	110.0-114.0	48/48 /100%	47/48 /98%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-6	C1	80.0-82.5	30/30 /100%	25/30 /83%
HA20-CMT-6	C2	82.5-85.8	40/40 /100%	40/40 /100%
HA20-CMT-6	C3	85.8-87.5	21/21 /100%	21/21 /100%
HA20-CMT-6	C4	87.5-92.5	-	--

Photo

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-6	C4	87.5-92.5	60/60 /100%	60/60 /100%
HA20-CMT-6	C5	92.5-96.2	45/45 /100%	34/45 /76%
HA20-CMT-6	C6	96.2-99.0	28/34 /82%	20/34 /59%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-6	C7	99.0-104.0	60/60 /100%	50/60 /83%
HA20-CMT-6	C8	104.0-109.0	57/60 /95%	57/60 /95%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-6	C9	109.0-114.0	60/60 /100%	54/60 /90%
HA20-CMT-6	C10	114.0-119.0	60/60 /100%	57/60 /95%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-6	C11	119.0-124.0	60/60 /100%	60/60 /100%
HA20-CMT-6	C12	124.0-126.0	34/34 /100%	31/34 /100%

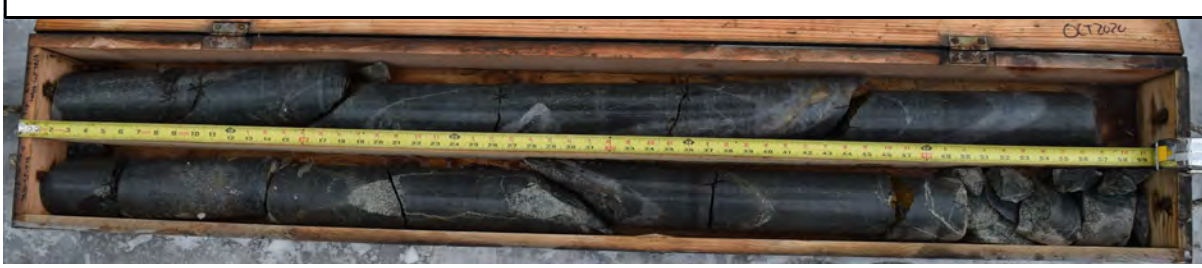
Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-102A	C1	94.5-96.5	24/24 /100%	24/24 /100%
HA20-GP-102A	C2	96.5-101.5	60/60 /100%	59/60 /98%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-102A	C3	101.5-106.5	60/60 /100%	58/60 /96.0%
HA20-GP-102A	C4	106.5-111.5	60/60 /100%	56/60 /93%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-102A	C5	111.5-116.5	58/60 /98%	57/60 /96%
HA20-GP-102A	C6	116.5-121.5	59/60 /98%	58/60 /97%



BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-102A	C7	121.5-126.5	60/60 /100%	53/60 /88%
HA20-GP-102A	C8	126.5-131.5	60/60 /100%	43/60 /72%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-102A	C9	131.5-136.5	53/60 /88%	38/60 /63%
HA20-GP-102A	C10	1365-141.5	57/60 /95%	53/60 /88%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-102A	C11	141.5-145.5	48/48 /100%	46/48 /96%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-105	C1	110.0-115.0	60/60 /100%	44/60 /73%
HA20-GP-105	C2	115.0-117.0	6/24 /25%	4/24 /17%
HA20-GP-105	C3	117.0-122.0	60/60 /100%	47/60 /78%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-105	C4	112.0-127.0	60/60 /100%	60/60 /100%
HA20-GP-105	C5	127.0-129.8	34/34 /100%	34/34 100%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-105	C6	129.8-134.7	59/59 /100%	56/59 /95%
HA20-GP-105	C7	134.7-136.0	15/16 /94%	11/16 /69%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-105	C8	136.0-140.3	52/52 /100%	48/52 /92%
HA20-GP-105	C9	140.3-141.8	18/18 /100%	18/18 /100%
HA20-GP-105	C10	141.8-143.8	24/24 /100%	20/24 /83%
HA20-GP-105	C11	143.8-146.6	34/34 /100%	32/34 /94%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-GP-105	C12	146.6-150.0	33/41 /80%	31/41 /76%
HA20-GP-105	C13	150.0-155.0	54/60 /90%	50/60 /83%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-5	C1	80.0-85.0	60/60 100%	60/60 100%
HA20-CMT-5	C2	85.0-89.0	48/48 100%	48/48 100%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-5	C3	90.0 – 95.0	60/60 100%	60/60 100%
HA20-CMT-5	C4	95.0 – 100.0	60/60 100%	60/60 100%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-5	C5	99.0 – 104.0	59/59 100%	59/59 100%
HA20-CMT-5	C6	104.0 – 104.0	48/48 100%	48/48 100%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-5	C7	108.0 – 112.0	48/48 100%	47/48 98%
HA20-CMT-5	C8	112.0 – 116.5	52/54 96%	50/54 93%

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-5	C9	116.5 – 120.3	46/46 100%	37/46 80%
HA20-CMT-5	C10	120.3 – 122.7	29/29 100%	26/29 90%

Photo 3

BORING	RUN	DEPTH (FT)	RECOVERY (IN./%)	RQD (IN./%)
HA20-CMT-5	C11	122.7 – 127.6	59/59 100%	59/59 100%
HA20-CMT-5	C12	127.6 – 130.4	34/34 100%	34/34 100%

EXHIBIT HB1-6

Summary of Slug Testing Results and Analysis

HALEY ALDRICH	CALCULATIONS	File No.:	131884-004
		Sheet:	1 of 3
Client:	Nuclear Metals Inc.	Date:	3-Nov-21
Project:	Nuclear Metals Inc. Superfund Site	Computed by:	NAF
Subject:	Remedial Design Holding Basin Containment	Checked by:	SHL

PROBLEM STATEMENT & OBJECTIVE

To evaluate the following related to the hydraulic properties of the Holding Basin (HB) at the Subject property:

a) Characterize the groundwater flow within the overburden soils and bedrock within the limits of the proposed low-permeability vertical wall and the cap area within the footprint of the HB.

b) Results will provide an estimate of the hydraulic conductivity (K) of each hydrogeologic unit.

REFERENCES

1. Bouwer, H., 1989. The Bouwer and Rice slug test--an update, Ground Water, vol. 27, no. 3, pp. 304-309
2. Bouwer, H. and R.C. Rice, 1976. A slug test method for determining hydraulic conducivity of unconfined aquifers with completely or partially penetrating wells, Water Resources Research, vol. 12, no. 3, pp. 423-428.
3. Aqtesolv Program, HYDROSOLV, Inc.

BOUWER AND RICE 1976 EQUATION

$$\ln(H_0) - \ln(H) = \frac{2K_r L t}{r_{ce}^2 \ln(R_e/r_{we})} \quad (1)$$

$$r_{ce} = \sqrt{(1-n_e)r_c^2 + n_e r_w^2} \quad (2)$$

$$r_{we} = r_w \sqrt{K_z/K_r} \quad (3)$$

where

- H is displacement at time t [L]
- H_0 is initial displacement at $t = 0$ [L]
- K_r is radial (horizontal) hydraulic conductivity [L/T]
- K_z is vertical hydraulic conductivity [L/T]
- L is screen length [L]
- n_e is effective porosity (specific yield) of the filter pack [dimensionless]
- r_c is nominal casing radius [L]
- r_w is well radius [L]
- R_e is external or effective radius of the test [L]
- t is elapsed time since initiation of the test [T]

AVAILABLE INFORMATION

1. Boring logs and well installation reports for observation wells including HA20-CMT-3B, HA20-CMT-3T, HA20-CMT-5, and HA20-CMT-6
2. Pressure transducer water level readings throughout the performed slug tests.

CONCEPTUAL ANALYSIS AND REASONING

1. This analysis used a mathematical solution for determining hydraulic conductivity (K) of an aquifer.
2. Analysis involves matching a straight line to water-level displacement data collected over time.
3. Haley & Aldrich repeated three rising and falling slug tests on each well in order to obtain the geometric means of hydraulic conductivity.

SEE PAGE 2 FOR RESULTS TABLE

HALEY ALDRICH	CALCULATIONS	File No.:	131884-004
		Sheet:	2 of 3
Client:	Nuclear Metals Inc.	Date:	3-Nov-2021
Project:	Nuclear Metals Inc. Superfund Site	Computed by	NAF
Subject:	Remedial Design Holding Basin Containment	Checked by:	SHL

MONITORING WELL CONSTRUCTION AND AQTESOLV INPUT SUMMARY

Location	Well Radius (rc) (ft)	Casing Radius (rw) (ft)	Saturated Thickness (ft)	3/31/2021 Groundwater Elevation (ft)	Water Column Height (ft)
HA20-CMT-3T	0.083	0.25	13.0	136.48	46.07
HA20-CMT-3B	0.083	0.25	13.0	137.50	63.97
HA20-CMT-5	0.083	0.25	14.0	143.52	70.73
HA20-CMT-6	0.083	0.25	8.0	144.03	50.49

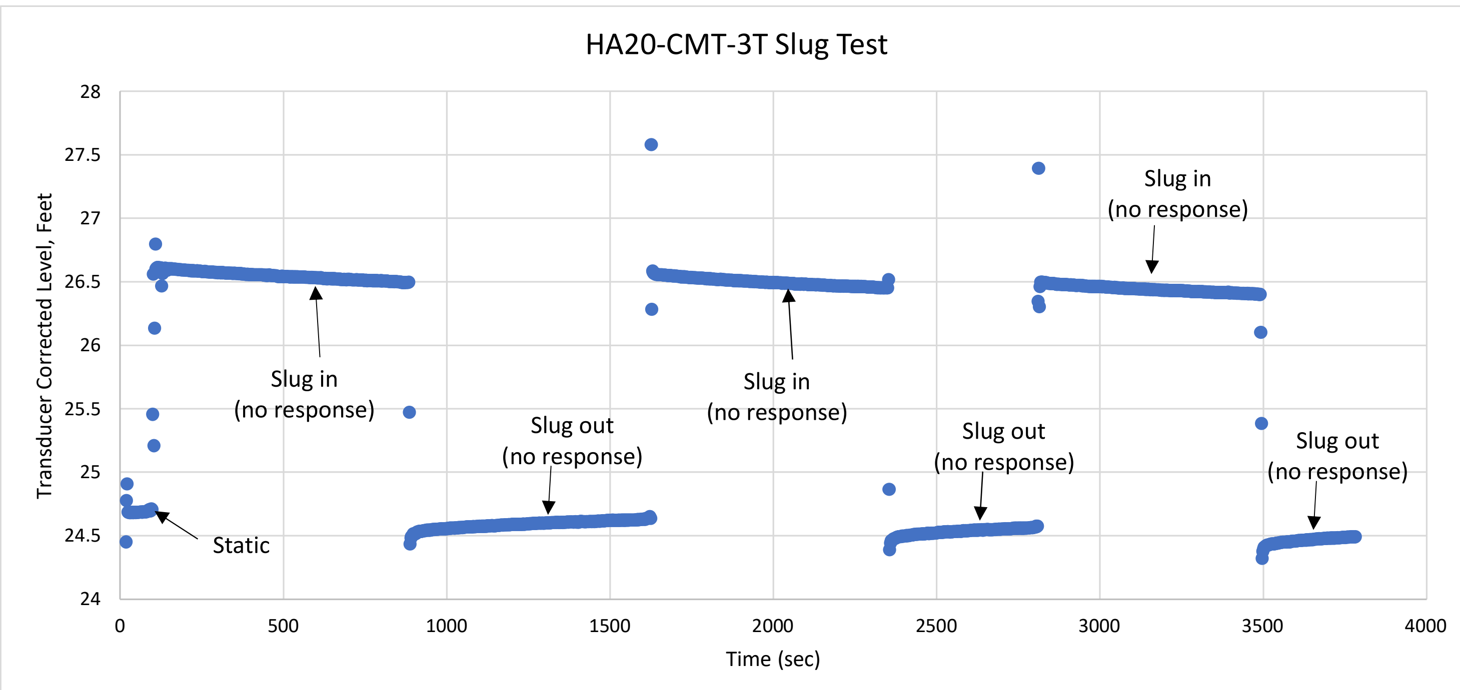
Note: 1. Saturated thickness is equal to length of filter pack for this analysis.

AQTESOLV HYDRAULIC CONDUCTIVITY RESULTS SUMMARY

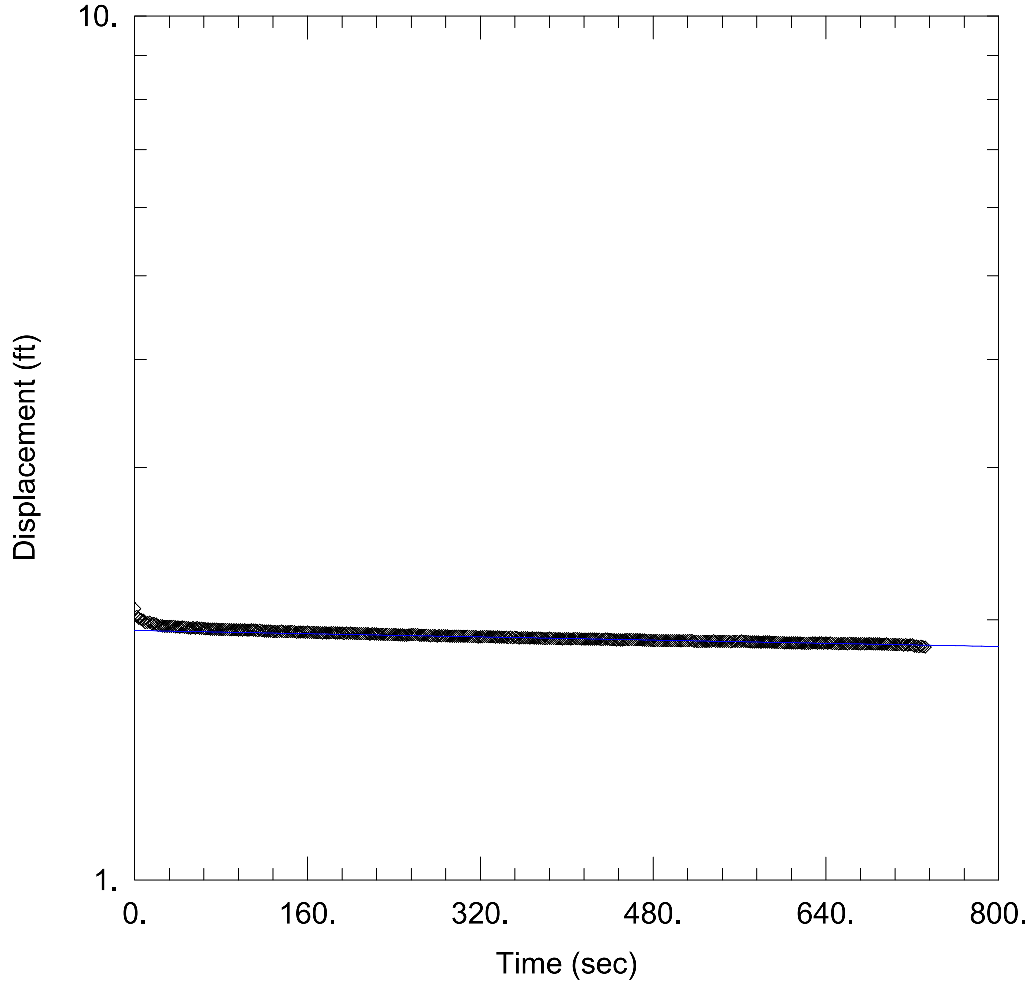
Location	Solution	Estimated Hydraulic Conductivity cm/sec	Estimated Hydraulic Conductivity (ft/day)	Screen Length (ft)	Elevation of well screen (NGVD ft)
HA20-CMT-3T(OW)	Bouwer-Rice (1989)	2.30E-06	0.0065	10.0	83.5 to 73.5
	Bouwer-Rice (1989)	3.28E-06	0.0093	10.0	83.5 to 73.5
	Geometric Mean:	**2.75E-06**	**0.0078**		
HA20-CMT-3B(OW)	Bouwer-Rice (1989)	5.18E-05	0.1469	10.0	83.5 to 73.5
	Bouwer-Rice (1989)	1.50E-04	0.4246	10.0	83.5 to 73.5
	Geometric Mean:	**8.81E-05**	**0.2497**		
HA20-CMT-5(OW)	Bouwer-Rice (1989)	6.58E-05	0.1866	5.0	82.8 to 72.8
	Bouwer-Rice (1989)	7.60E-05	0.2153	5.0	82.8 to 72.8
	Geometric Mean:	**7.07E-05**	**0.2004**		
HA20-CMT-6(OW)	Bouwer-Rice (1989)	5.53E-05	0.1566	10.0	98.5 to 93.5
	Bouwer-Rice (1989)	4.43E-05	0.1256	10.0	98.5 to 93.5
	Geometric Mean:	**4.95E-05**	**0.1403**		

CALCULATIONS		File No.:	131884-004
		Sheet:	3 of 3
Client:	Nuclear Metals Inc.	Date:	3-Nov-21
Project:	Nuclear Metals Inc. Superfund Site	Computed by:	NAF
Subject:	Remedial Design Holding Basin Containment	Checked by:	SHL

HA20-CMT-3T SLUG TEST RESPONSE CURVE



NOTE: After performing three slug tests (rising/falling head) on HA20-CMT-3T no discernable response was oberserved. However, from the inferred results of slug tests performed on HA20-CMT-3T(OW) a hydraulic conducitivity (K) value is 2.75E-06 cm/sec or 0.0078 ft/day.



WELL TEST ANALYSIS

Data Set: \...\HA20-3T_SlugTest_1.aqt
Date: 11/04/21
Time: 10:05:21

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA21-CMT-3B(OW)
Test Date: 4/13/2021

AQUIFER DATA

Saturated Thickness: 13. ft
Anisotropy Ratio (Kz/Kr): 1.

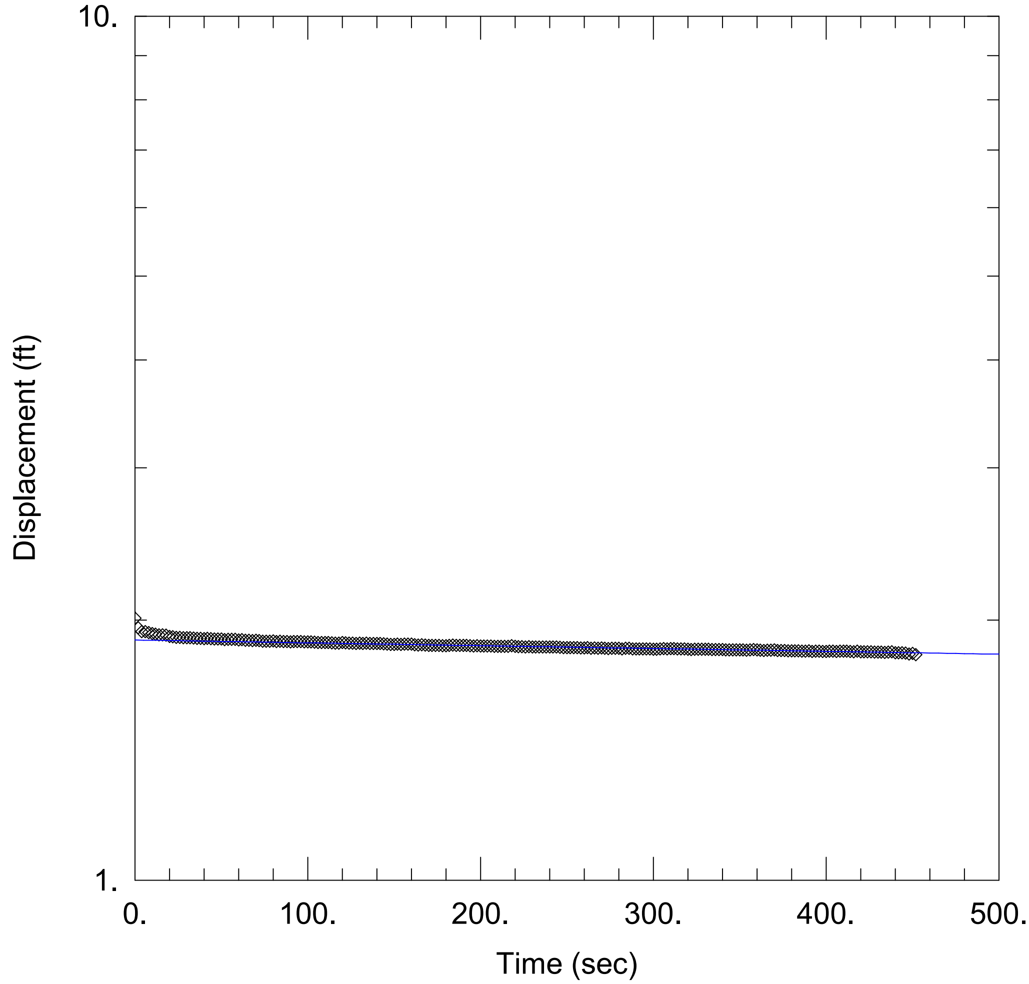
WELL DATA (HA20-CMT-3T(OW) S-Bedrock)

Initial Displacement: 2.06 ft
Static Water Column Height: 46.07 ft
Total Well Penetration Depth: 92. ft
Screen Length: 10. ft
Casing Radius: 0.0833 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 2.308E-6 cm/sec
y0 = 1.943 ft



WELL TEST ANALYSIS

Data Set: \...\HA20-3T_SlugTest_1.aqt
Date: 11/04/21
Time: 10:07:12

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA21-CMT-3B(OW)
Test Date: 4/13/2021

AQUIFER DATA

Saturated Thickness: 13. ft
Anisotropy Ratio (Kz/Kr): 1.

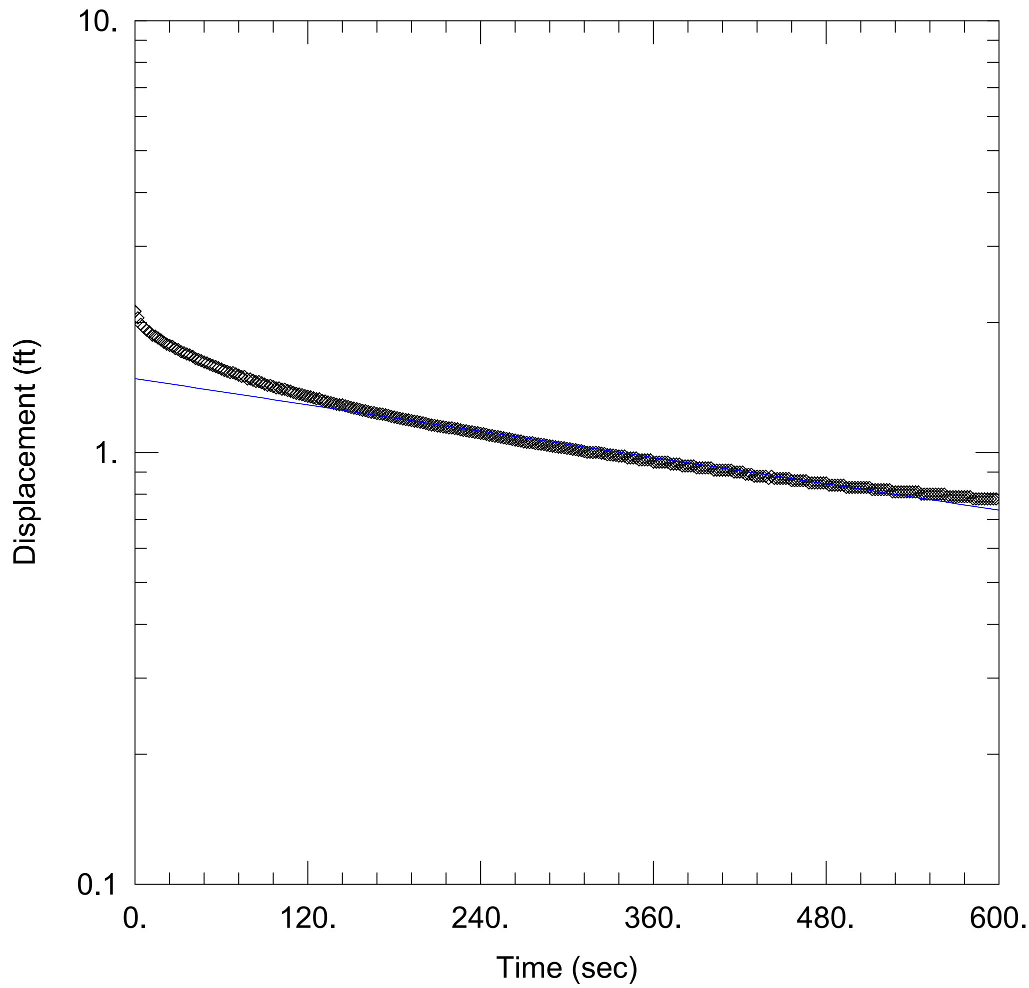
WELL DATA (HA20-CMT-3T(OW) S-Bedrock)

Initial Displacement: 2.01 ft
Static Water Column Height: 46.07 ft
Total Well Penetration Depth: 92. ft
Screen Length: 10. ft
Casing Radius: 0.0833 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 3.282E-6 cm/sec
y0 = 1.896 ft



WELL TEST ANALYSIS

Data Set: \...\HA20-3B_SlugTest_1.aqt
Date: 11/04/21
Time: 10:27:06

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA21-CMT-3B(OW)
Test Date: 4/13/2021

AQUIFER DATA

Saturated Thickness: 13. ft
Anisotropy Ratio (Kz/Kr): 1.

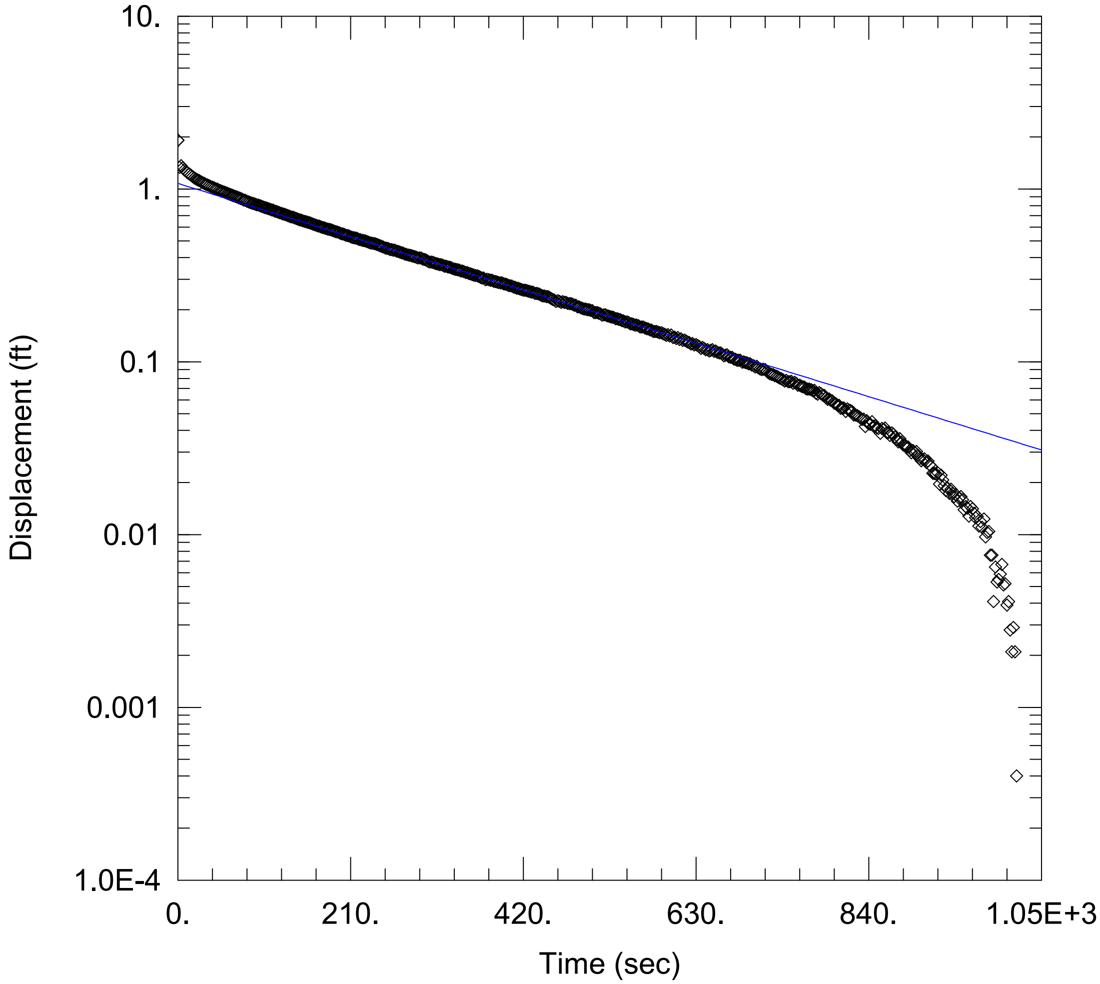
WELL DATA (HA20-CMT-3B(OW) S-Bedrock)

Initial Displacement: 2.12 ft
Total Well Penetration Depth: 108. ft
Casing Radius: 0.0833 ft
Static Water Column Height: 63.97 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 5.182E-5 cm/sec
y0 = 1.482 ft



WELL TEST ANALYSIS

Data Set: \...\HA20-3B_SlugTest_2.aqt
Date: 11/04/21 Time: 10:27:26

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-3B(OW)
Test Date: 4/13/2021

AQUIFER DATA

Saturated Thickness: 13. ft
Anisotropy Ratio (Kz/Kr): 1.

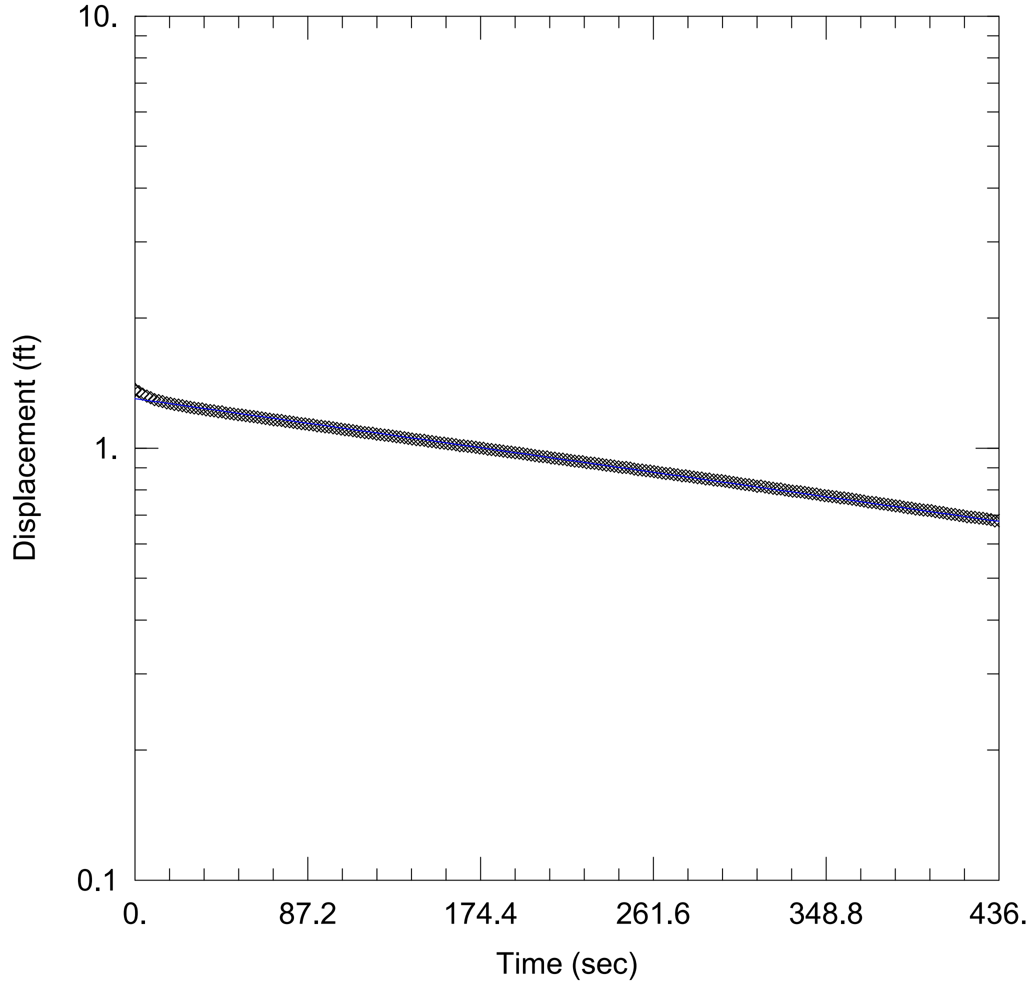
WELL DATA (HA20-CMT-3(OW) S-Bedrock)

Initial Displacement: 1.91 ft
Total Well Penetration Depth: 108. ft
Casing Radius: 0.0833 ft
Static Water Column Height: 63.97 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.0001498 cm/sec
y0 = 1.076 ft



WELL TEST ANALYSIS

Data Set: \...\HA20-CMT-5_SlugTest_1.aqt
Date: 11/04/21 Time: 10:27:57

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-5(OW)
Test Date: 4/13/2021

AQUIFER DATA

Saturated Thickness: 14. ft
Anisotropy Ratio (Kz/Kr): 1.

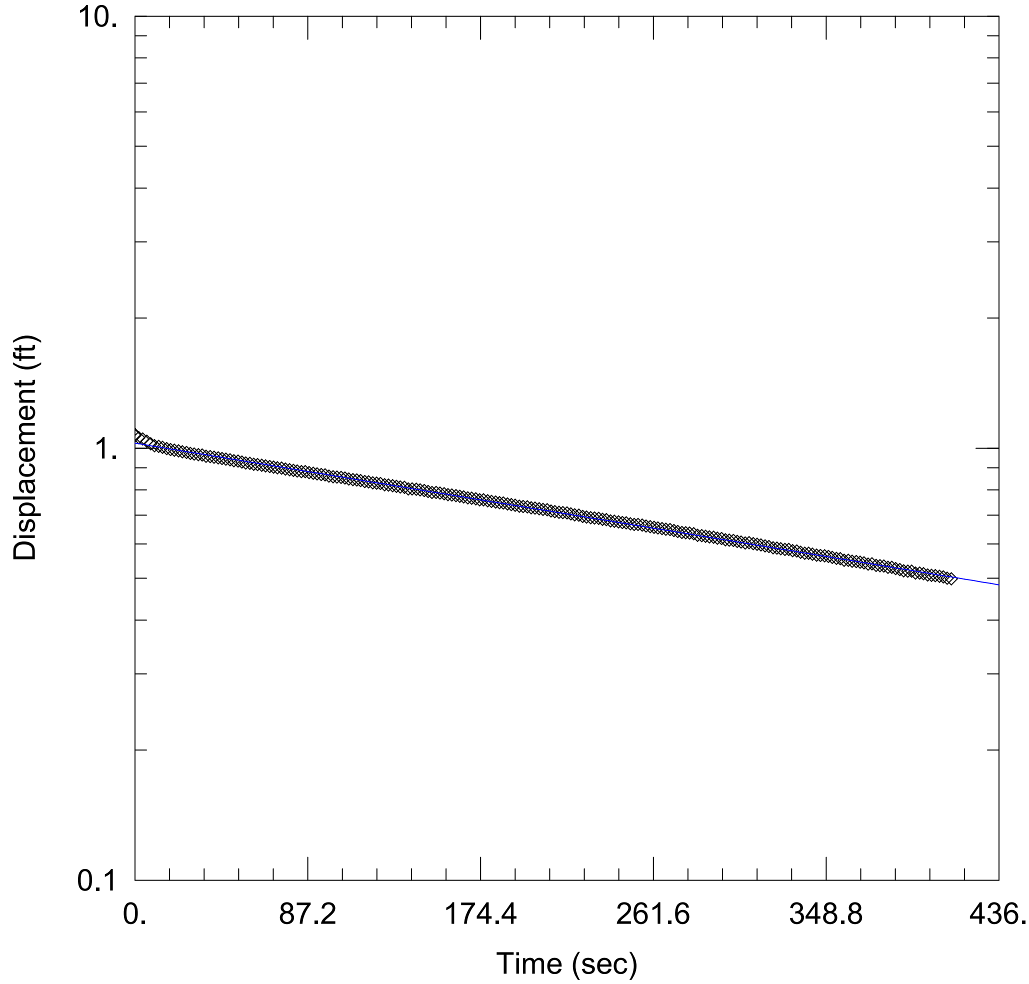
WELL DATA (HA20-CMT-5(OW) I-Bedrock)

Initial Displacement: 1.36 ft
Total Well Penetration Depth: 100. ft
Casing Radius: 0.0833 ft
Static Water Column Height: 70.73 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 6.582E-5 cm/sec
y0 = 1.302 ft



WELL TEST ANALYSIS

Data Set: \...\HA20-CMT-5_SlugTest_2.aqt
Date: 11/04/21 Time: 10:28:18

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-5(OW)
Test Date: 4/13/2021

AQUIFER DATA

Saturated Thickness: 14. ft
Anisotropy Ratio (Kz/Kr): 1.

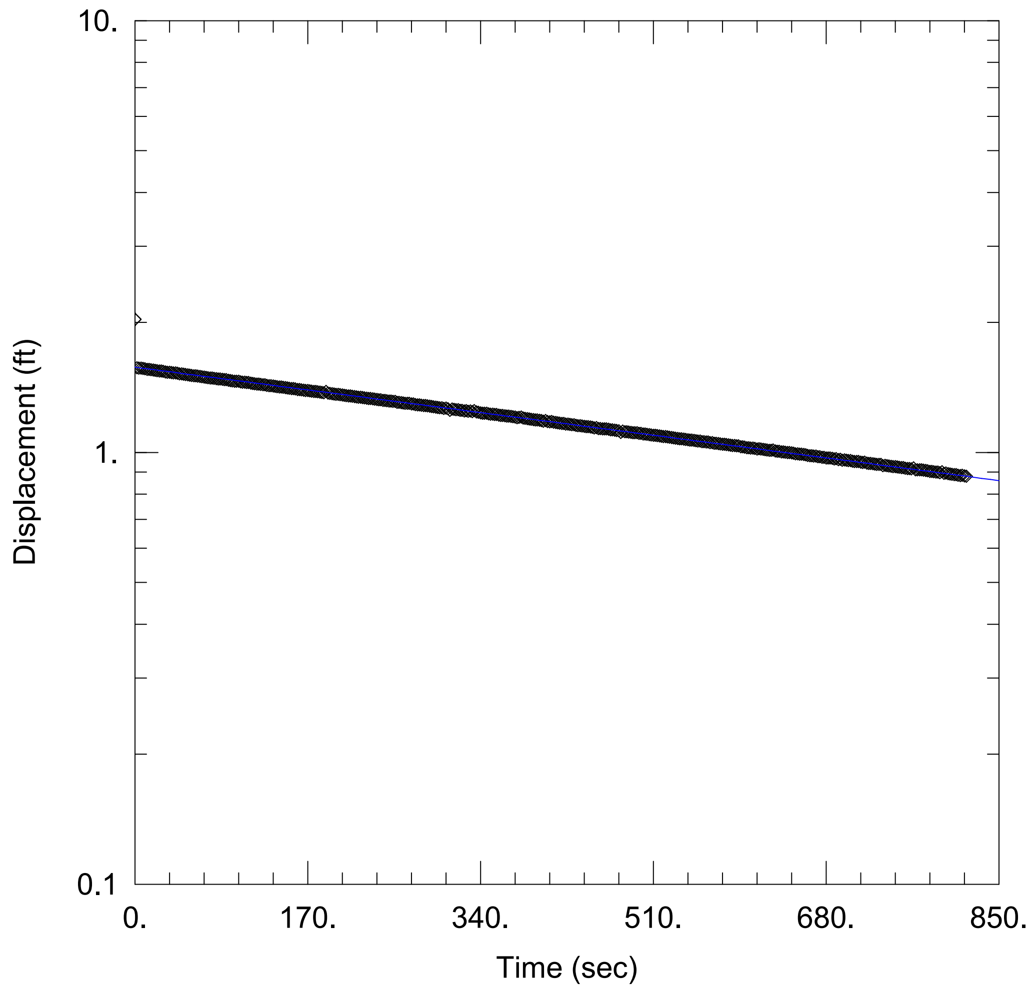
WELL DATA (HA20-CMT-5(OW) I-Bedrock)

Initial Displacement: 1.07 ft
Static Water Column Height: 70.73 ft
Total Well Penetration Depth: 100. ft
Screen Length: 10. ft
Casing Radius: 0.0833 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 7.597E-5 cm/sec
y0 = 1.027 ft



WELL TEST ANALYSIS

Data Set: \...\HA20-CMT-6_SlugTest_1.aqt
Date: 11/04/21 Time: 10:28:40

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-6(OW)
Test Date: 4/13/2021

AQUIFER DATA

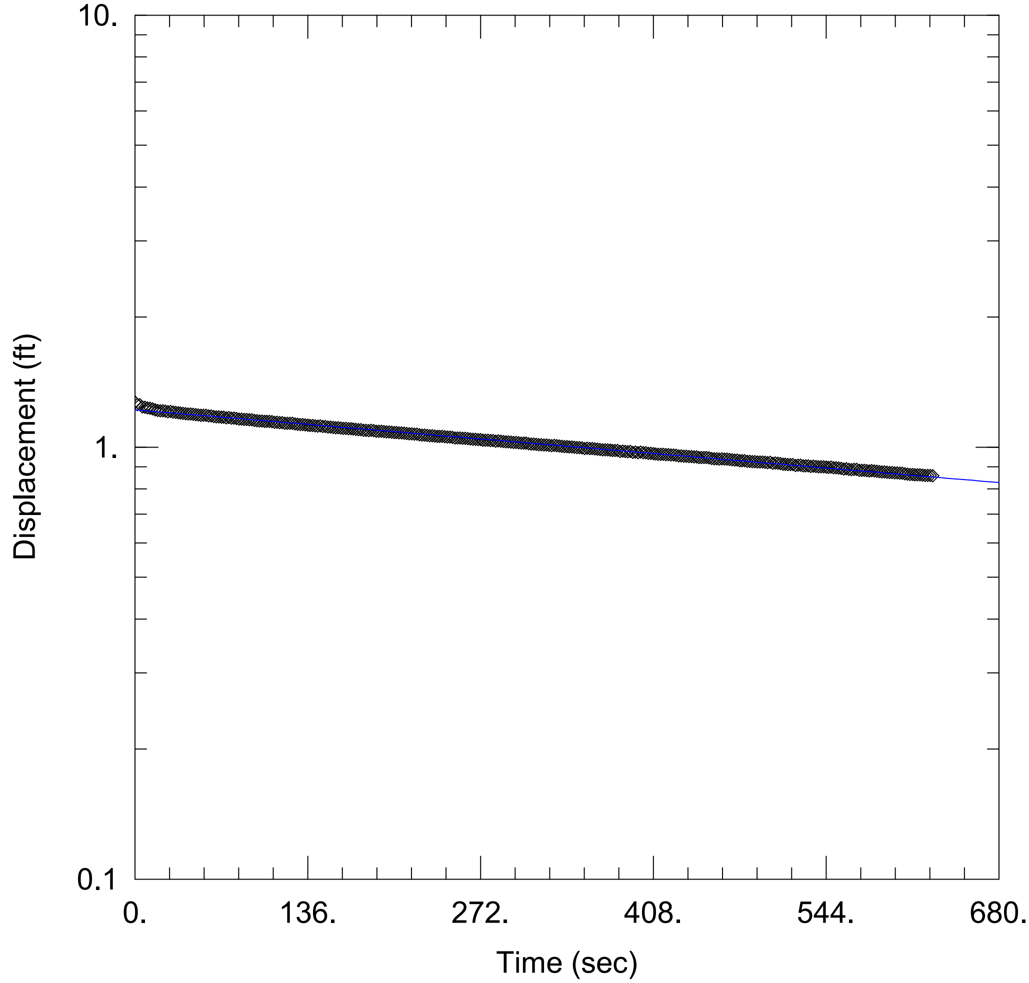
Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (HA20-CMT-6(OW) S-Bedrock)

Initial Displacement: 2.03 ft
Static Water Column Height: 50.49 ft
Total Well Penetration Depth: 84. ft
Screen Length: 5. ft
Casing Radius: 0.0833 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 5.526E-5 cm/sec
y0 = 1.575 ft



WELL TEST ANALYSIS

Data Set: \...\HA20-CMT-6_SlugTest_2.aqt
Date: 11/04/21
Time: 10:28:59

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-6(OW)
Test Date: 4/13/2021

AQUIFER DATA

Saturated Thickness: 8. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (HA20-CMT-6(OW) S-Bedrock)

Initial Displacement: 1.27 ft
Static Water Column Height: 50.49 ft
Total Well Penetration Depth: 84. ft
Screen Length: 5. ft
Casing Radius: 0.0833 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 4.43E-5 cm/sec
y0 = 1.22 ft

EXHIBIT HB1-7

Summary of Pumping Test Data Collection and Analysis

PROBLEM STATEMENT & OBJECTIVE

To evaluate the following related to the hydrogeologic parameters of the bedrock aquifer:

a) Evaluate pumping test response data to determine transmissivity, storativity, and hydraulic conductivity.
b) Three total pumping tests were completed and evaluated in this analysis: HA20-CMT-3B(OW), HA20-CMT-5(OW), and HA20-CMT-6(OW).

REFERENCES

1. Hantush, M.S. and C.E. Jacob, 1955. Non-steady radial flow in an infinite leaky aquifer, Am. Geophys. Union Trans., vol. 36, no. 1, pp. 95-100.
2. Hantush, M.S., 1964. Hydraulics of wells, in: Advances in Hydroscience, V.T. Chow (editor), Academic Press, New York, pp. 281-442.
3. Aqtesolv Program, HYDROSOLV, Inc.

AVAILABLE INFORMATION

1. Boring logs and rock core reports for observation and pumping wells including: HA20-CMT-3(OW), HA20-CMT-5(OW), and HA20-CMT-6(OW).
2. Pumping test field notes and measurements for rate and depth to water, static groundwater elevations.
3. Transducer water level data from pumping well and each observation well.

HA20-CMT-3B(OW) PUMPING TEST:

1. The HA20-CMT-3B (OW) pumping test occurred on 27 April 2021.
2. The bedrock well was pumping using a Geotech Ss Geosub submerisble pump.
3. The flow rate remained constant at 0.3 gallons per minute for five hours.
4. The resulting geometric mean hydraulic conductivity from the testing is 2.26E-05 cm/sec.

HA20-CMT-5(OW) PUMPING TEST:

1. The HA20-CMT-5 (OW) pumping test occurred on 19 April 2021.
2. The bedrock well was pumping using a Geotech Ss Geosub submerisble pump.
3. The well was pumped at an initial flow rate of 3.0 gallons per minute for 30 minutes. The well was then allowed to recover for approximately one hour to allow water level to return to 75% of initial static conditions. The well was then pumped at a flow rate of 0.3 gallons per minute for five hours.
4. The resulting geometric mean hydraulic conductivity from the testing is 3.99E-06 cm/sec.

HA20-CMT-6(OW) PUMPING TEST:

1. The HA20-CMT-6 (OW) pumping test occurred on 20 April 2021.
2. The bedrock well was pumping using a Geotech Ss Geosub submerisble pump.
3. The well was pumped at an initial flow rate of 2.0 gallons per minute for 30 minutes. The well was then allowed to recover for approximately one hour to allow water level to return to 75% of initial static conditions. The well was then pumped at a flow rate of 0.3 gallons per minute for five hours.
4. The resulting geometric mean hydraulic conductivity from the testing is 2.03E-05 cm/sec.

SEE PAGE 2 FOR PUMPING TEST RESULTS

HALEY ALDRICH	CALCULATIONS	File No.:	131884-004
		Sheet:	2 of 2
Client:	Nuclear Metals Inc.	Date:	3-Nov-2021
Project:	Nuclear Metals Inc. Superfund Site	Computed by	NAF
Subject:	Remedial Design Holding Basin Containment	Checked by:	SHL

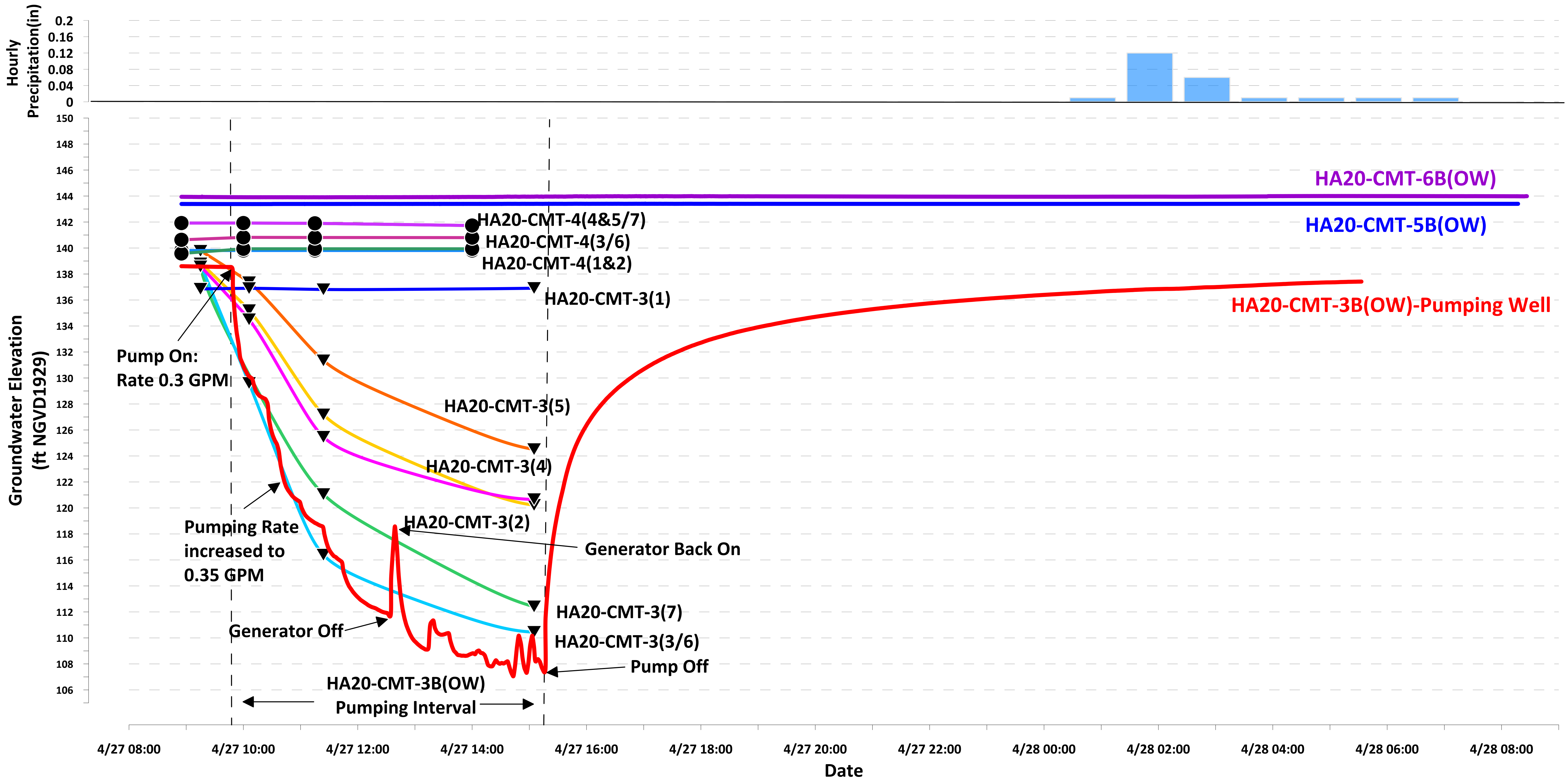
MONITORING WELL CONSTRUCTION AND AQTESOLV INPUT SUMMARY

Location	Well Radius (rc) (ft)	Casing Radius (rw) (ft)	Saturated Thickness (ft)
HA20-CMT-3	0.083	0.25	13.0
HA20-CMT-5	0.083	0.25	14.0
HA20-CMT-6	0.083	0.25	8.0

Note: 1. Saturated thickness is equal to length of filter pack for this analysis.

AQTESOLV HYDRAULIC CONDUCTIVITY RESULTS SUMMARY

Location	Solution	Estimated Transmissivity (ft^2/day)	Estimated Hydraulic Conductivity (cm/sec)	Storage Coefficient (unitless)	Elevation of well screen (NGVD ft)
HA20-CMT-3B(OW)	Hantush-Jacob (1955/1964)	0.798	2.17E-05	5.75E-02	83.5 to 73.5
	Hantush-Jacob (1955/1964)	0.868	2.36E-05	4.39E-02	83.5 to 73.5
	Geometric Mean:	**0.833**	**2.26E-05**	**5.02E-02**	
HA20-CMT-5(OW)	Hantush-Jacob (1955/1964)	0.275	6.94E-06	6.53E-02	82.8 to 72.8
	Hantush-Jacob (1955/1964)	0.091	2.29E-06	5.37E-02	82.8 to 72.8
	Geometric Mean:	**0.158**	**3.99E-06**	**5.92E-02**	
HA20-CMT-6(OW)	Hantush-Jacob (1955/1964)	0.991	4.37E-05	9.44E-04	98.5 to 93.5
	Hantush-Jacob (1955/1964)	0.215	9.47E-06	8.50E-02	98.5 to 93.5
	Geometric Mean:	**0.461**	**2.03E-05**	**8.95E-03**	



- HA20-CMT-3B(OW)-Bedrock
- HA20-CMT-5B(OW)-Bedrock
- HA20-CMT-6B(OW)-Bedrock
- HA20-CMT-3(1)-Ice Contact Deposits
- HA20-CMT-3(2)-Glacial Till
- HA20-CMT-3(3/6)-Shallow Bedrock
- HA20-CMT-3(4)-Intermediate Bedrock
- HA20-CMT-3(5)-Intermediate Bedrock
- HA20-CMT-3(7)-Deep Bedrock
- HA20-CMT-4(1)-Ice Contact Deposits
- HA20-CMT-4(2)-Glacial Till
- HA20-CMT-4(3/6)-Shallow Bedrock
- HA20-CMT-4(4)-Intermediate Bedrock
- HA20-CMT-4(5/7)-Deep Bedrock
- Precipitation

NOTE: 1. Pumping test ran at 0.3 gallons per minute for a duration of 5 hours.
2. Pumping Well (HA20-3B (OW) screened El. 83.5 to 73.5.
3. HA20-5B (OW) screened El. 82.8 to 72.8.
4. HA20-6B (OW) screened El. 98.5 to 93.5.
5. Precipitation data is sourced from the closest NOAA climatological data station, Bedford Hanscom Field, MA, Station ID: 72505914702.

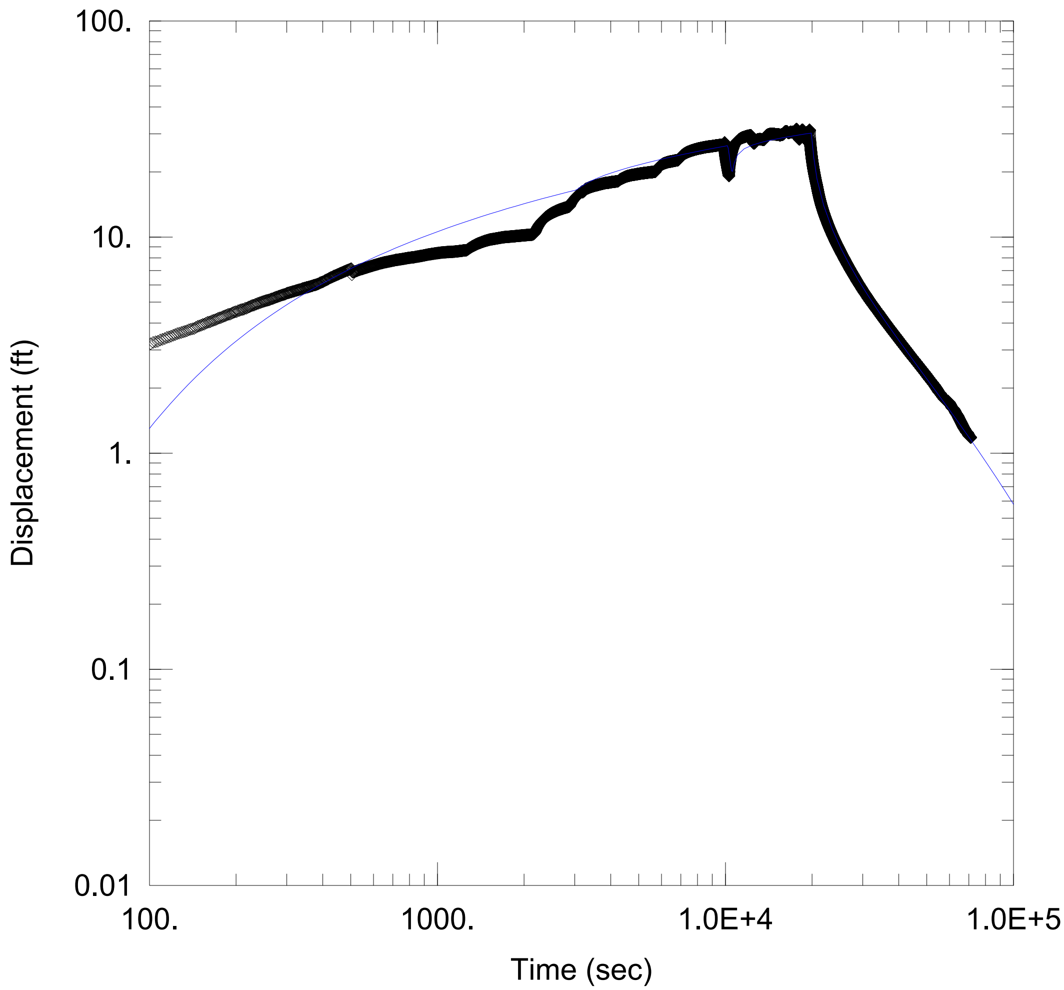
HALEY ALDRICH

Nuclear Metals, Inc. Superfund Site
2299 Main Street
Concord, MA

HA20-3B(OW) 27 APRIL 2021
PUMPING TEST SUMMARY

JUNE 2021

FIGURE 3



WELL TEST ANALYSIS

Data Set: \...\HA20-3B_Drawdown-D2.aqt
Date: 11/03/21 Time: 10:48:24

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-3B(OW)
Test Date: 4/27/2021

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
HA20-CMT-3(OW) S-Bed	677666.3042	2985853.904

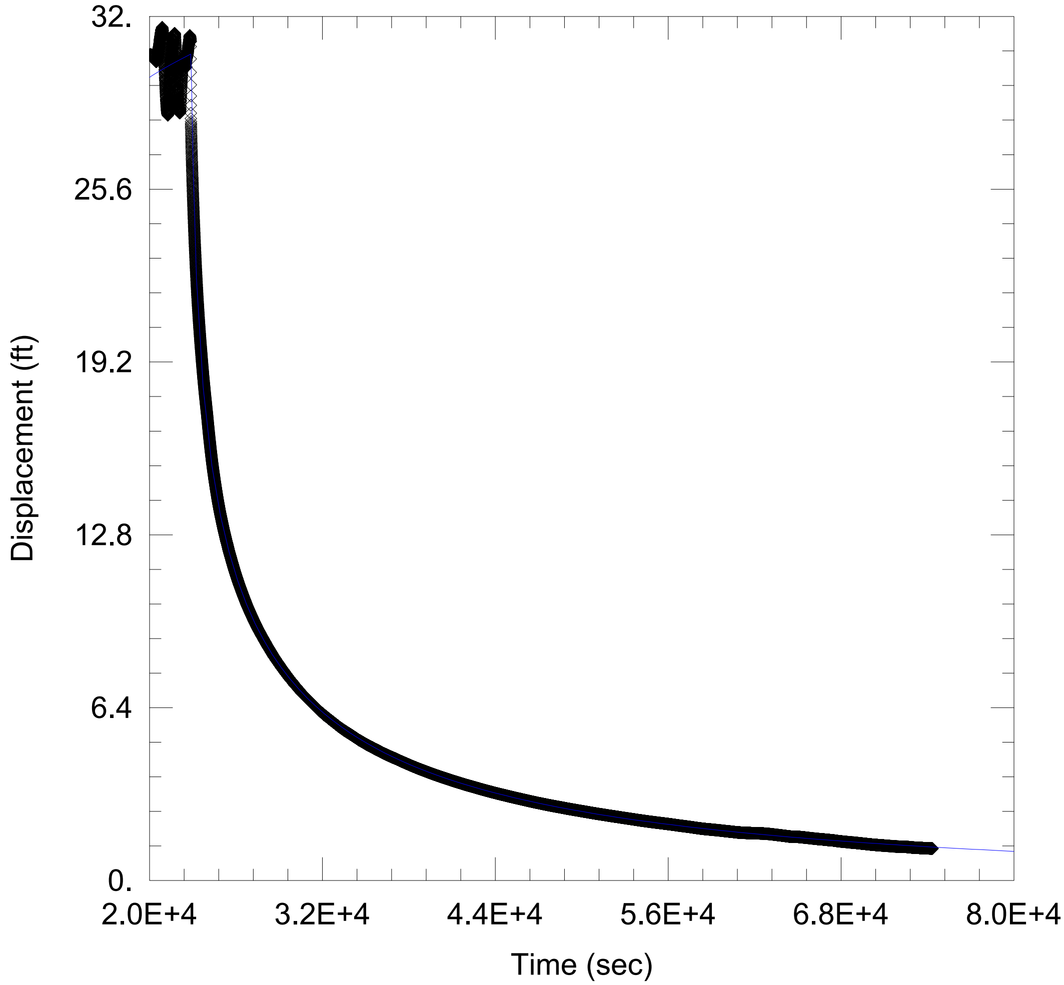
Observation Wells

Well Name	X (ft)	Y (ft)
◇ HA20-CMT-3(OW) S-B	677666.3042	2985853.904

SOLUTION

Aquifer Model: Leaky
Solution Method: Hantush-Jacob

T = 0.7984 ft^2/day
S = 0.0575
r/B = 0.06264
Kz/Kr = 1.
b = 13. ft



WELL TEST ANALYSIS

Data Set: \...\HA20-3B_Recovery.aqt
Date: 11/03/21 Time: 10:47:50

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: CMT-3(OW)
Test Date: 4/27/2021

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
HA20-CMT-3(OW) S-Bed	677666.3042	2985853.904

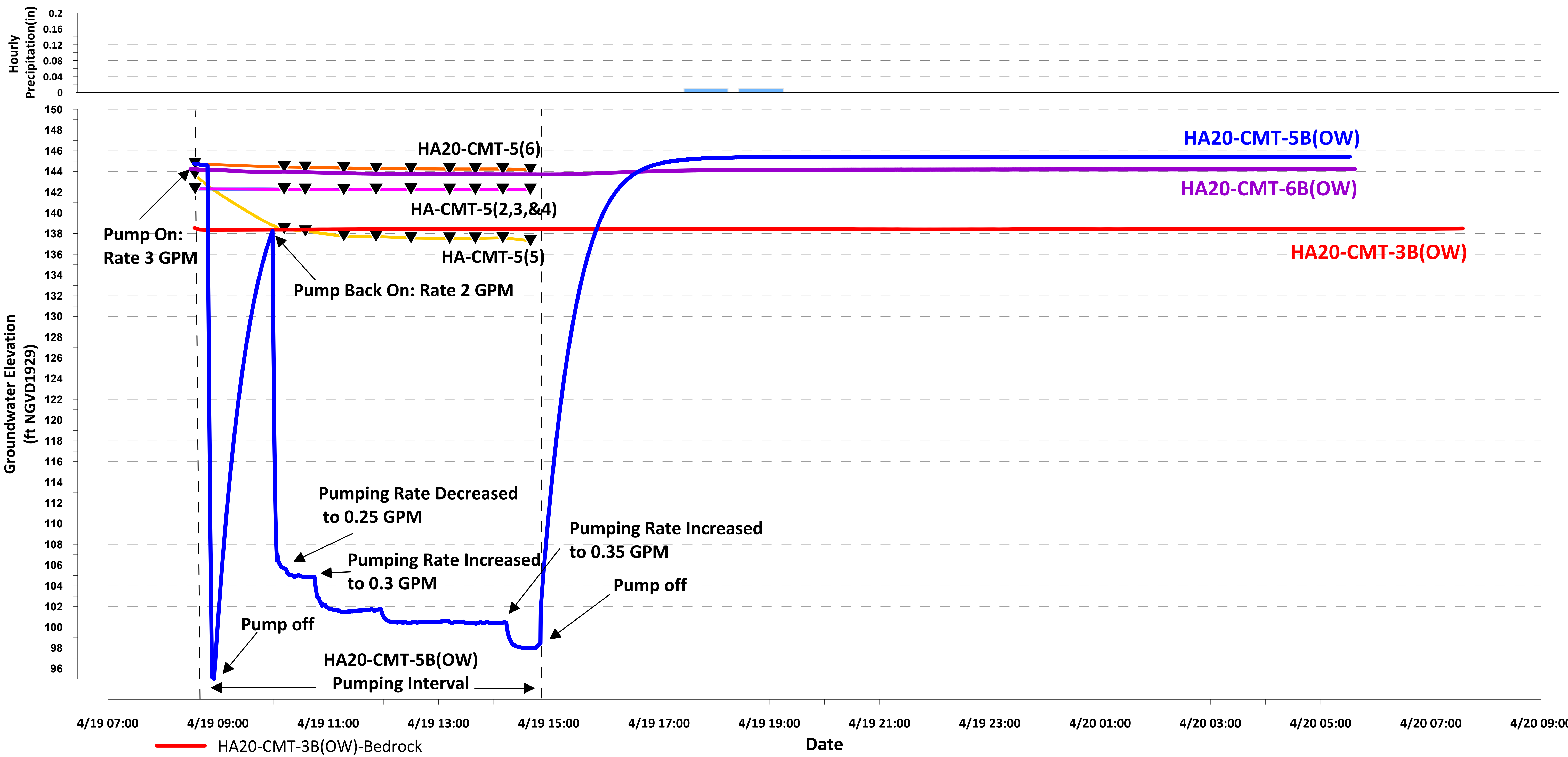
Observation Wells

Well Name	X (ft)	Y (ft)
◇ HA20-CMT-3(OW) S-Be	677666.3042	2985853.904

SOLUTION

Aquifer Model: Leaky
Solution Method: Hantush-Jacob

T = 0.8682 ft^2/day
S = 0.0439
r/B = 0.04822
Kz/Kr = 1.
b = 13. ft



HA20-CMT-3B(OW)-Bedrock
HA20-CMT-6B(OW)-Bedrock
HA20-CMT-5B(OW)-Bedrock
HA20-CMT-5(2)-Ice Contact Deposits
HA20-CMT-5(3)-Glacial Till
HA20-CMT-5(4)-Shallow Bedrock
HA20-CMT-5(5)-Intermediate Bedrock
HA20-CMT-5(6)-Intermediate Bedrock
Precipitaiton

NOTE:
1. Pumping test ran at 0.3 gallons per minute for a duration of 5 hours.
2. Pumping Well (HA20-5B (OW) screened El. 82.8 to 72.8
3. HA20-3B (OW) screened El. 83.5 to 73.5.
4. HA20-6B (OW) screened El. 98.5 to 93.5.
5. Precipitation data is sourced from the closest NOAA climatological data station, Bedford Hanscom Field, MA, Station ID: 72505914702.

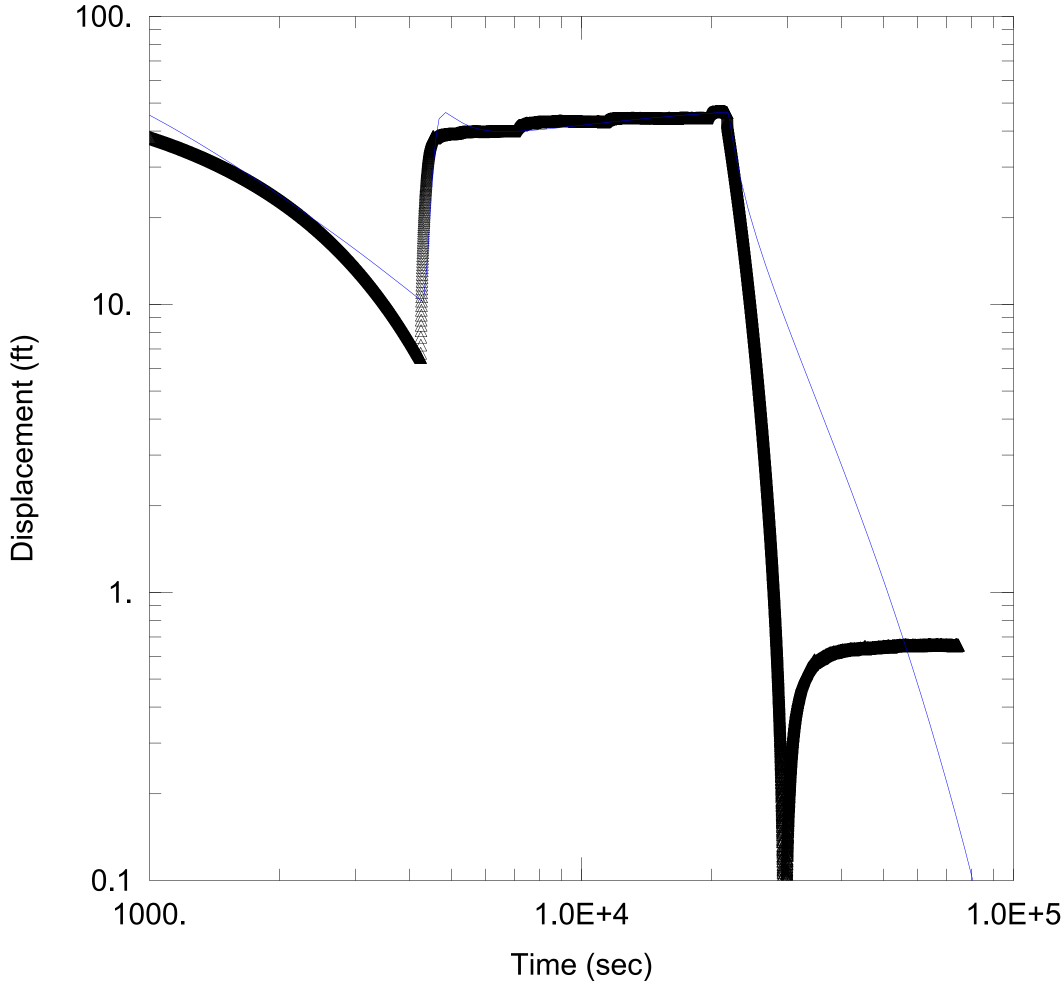
HALEY ALDRICH

Nuclear Metals, Inc. Superfund Site
2299 Main Street
Concord, MA

HA20-5B(OW) 19 APRIL 2021
PUMPING TEST SUMMARY

JUNE 2021

FIGURE 1



WELL TEST ANALYSIS

Data Set: \...\HA20-CMT-5_Drawdown.aqt
Date: 11/03/21 Time: 10:49:53

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-5(OW)
Test Date: 4/19/2021

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
HA20-CMT-5(OW) I-Bedr	677817.6461	2985892.135

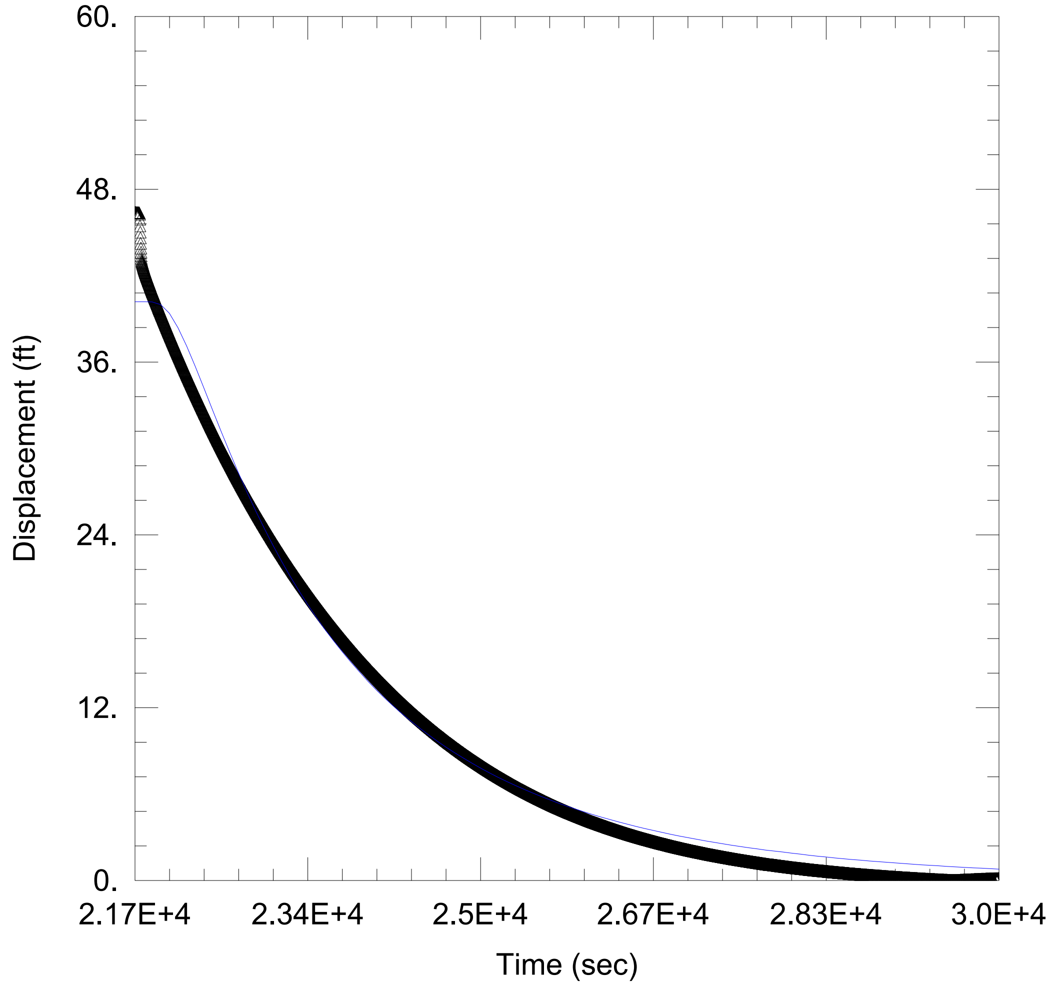
Observation Wells

Well Name	X (ft)	Y (ft)
△ HA20-CMT-5(OW) I-Be	677817.6461	2985892.135

SOLUTION

Aquifer Model: Leaky
Solution Method: Hantush-Jacob

T = 0.2753 ft^2/day
S = 0.06528
r/B = 0.2734
Kz/Kr = 1.
b = 14. ft



WELL TEST ANALYSIS

Data Set: \...\HA20-CMT-5_Recovery.aqt
Date: 11/03/21 Time: 10:51:18

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-5(OW)
Test Date: 4/19/2021

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
HA20-CMT-5(OW) I-Bedr	677817.6461	2985892.135

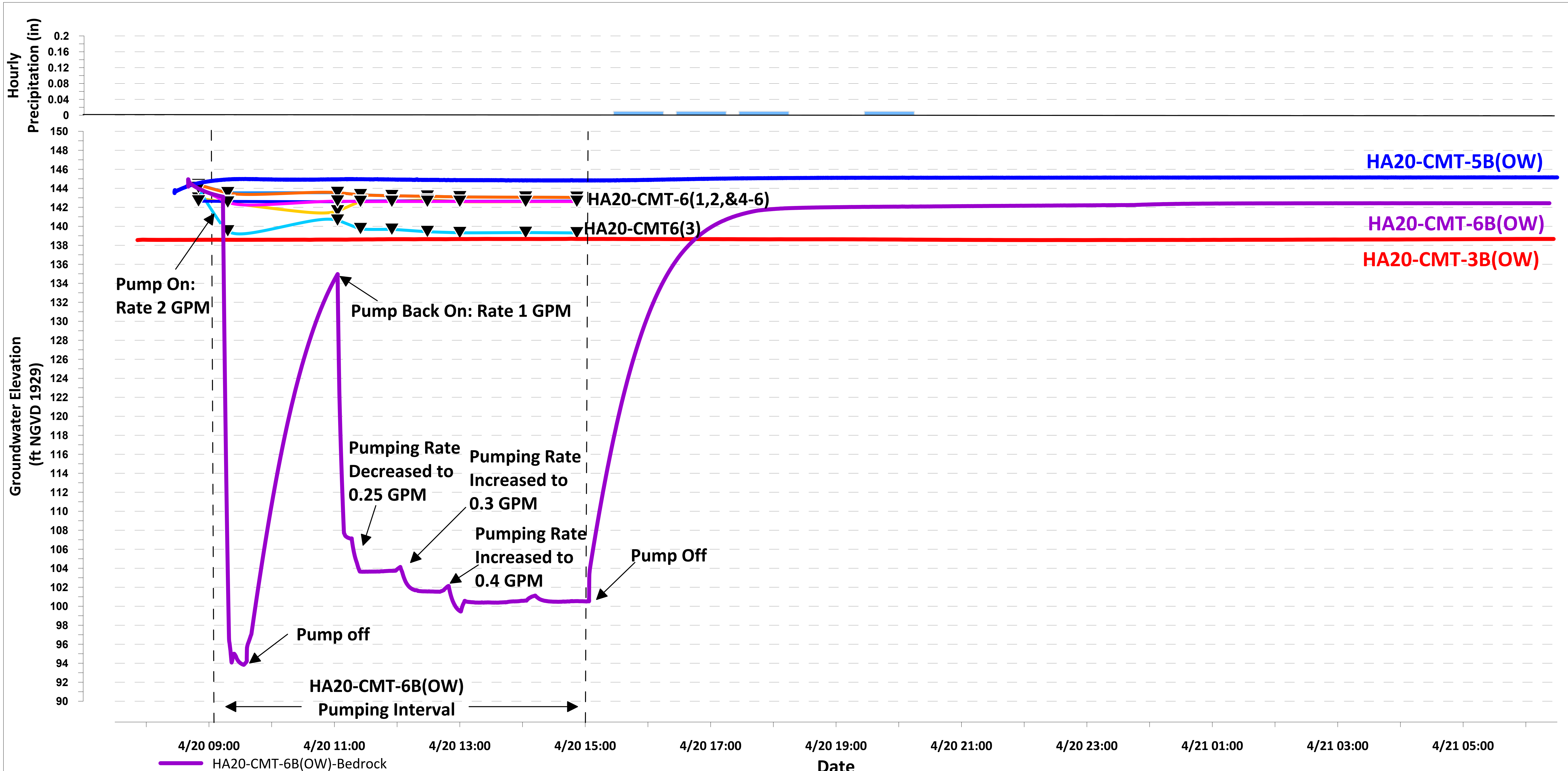
Observation Wells

Well Name	X (ft)	Y (ft)
△ HA20-CMT-5(OW) I-Be	677817.6461	2985892.135

SOLUTION

Aquifer Model: Leaky
Solution Method: Hantush-Jacob

T = 0.09099 ft^2/day
r/B = 1.04
b = 14. ft
S = 0.05371
Kz/Kr = 1.



HA20-CMT-6B(OW)-Bedrock
HA20-CMT-3B(OW)-Bedrock
HA20-CMT-5B(OW)-Bedrock
HA20-CMT-6(1)-Shallow Bedrock
HA20-CMT-6(2)-Ice Contact Deposits
HA20-CMT-6(3)-Shallow Bedrock
HA20-CMT-6(4)-Shallow Bedrock
HA20-CMT-6(5)-Intermediate Bedrock
HA20-CMT-6(6)-Deep Bedrock
Precipitation

NOTE: 1. Pumping test ran at 0.3 gallons per minute for a duration of 5 hours.
2. Pumping Well (HA20-6B (OW) screened El. 98.5 to 93.5
3. HA20-3B (OW) screened El. 83.5 to 73.5.
4. HA20-5B (OW) screened El.82.8 to 72.8.
5. Precipitation data is sourced from the closest NOAA climatological data station, Bedford Hanscom Field, MA, Station ID: 72505914702.

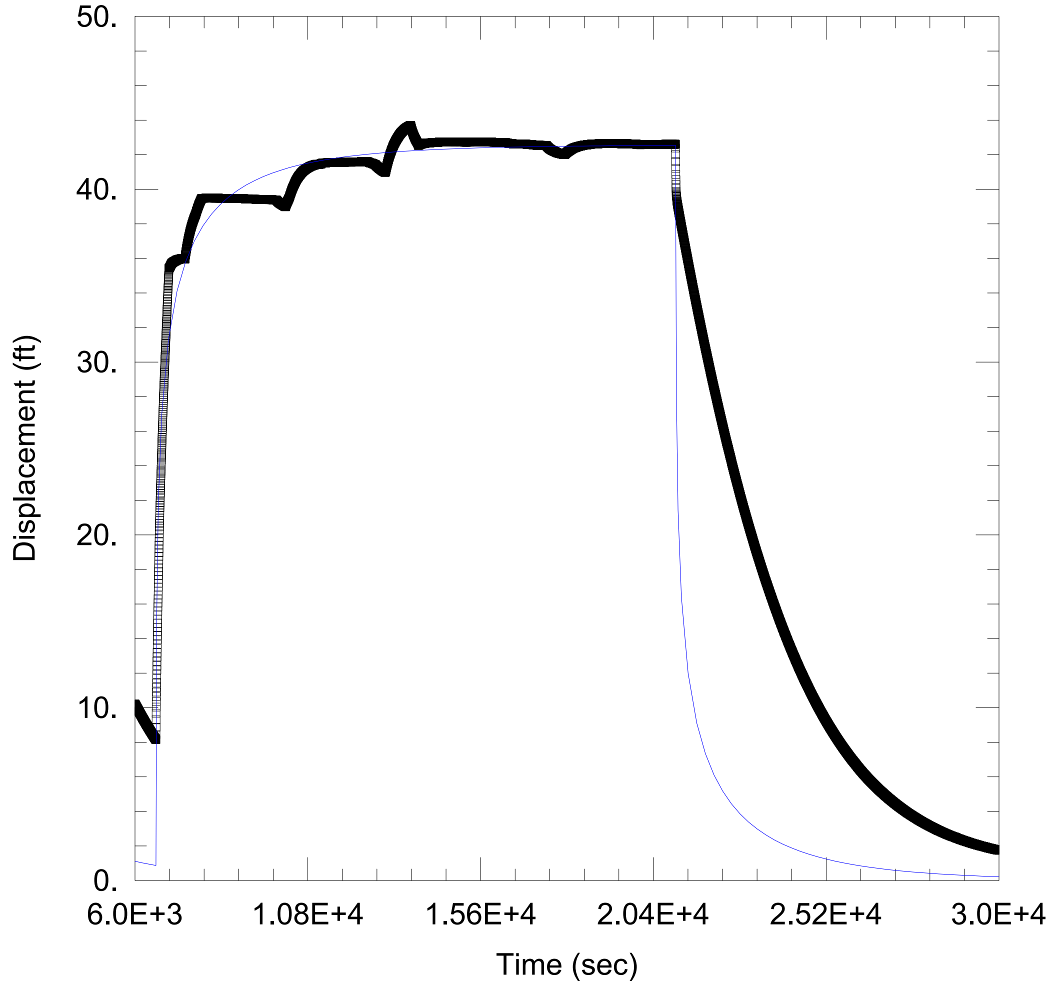
HALEY ALDRICH

Nuclear Metals, Inc. Superfund Site
2299 Main Street
Concord, MA

HA20-6B(OW) 20 APRIL 2021
PUMING TEST SUMMARY

JUNE 2021

FIGURE 2



WELL TEST ANALYSIS

Data Set: \...\HA20-CMT-6(OW)_Drawdown.aqt
Date: 11/03/21 Time: 10:55:27

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-6(OW)
Test Date: 4/21/2021

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
HA20-CMT-6(OW)	0	0

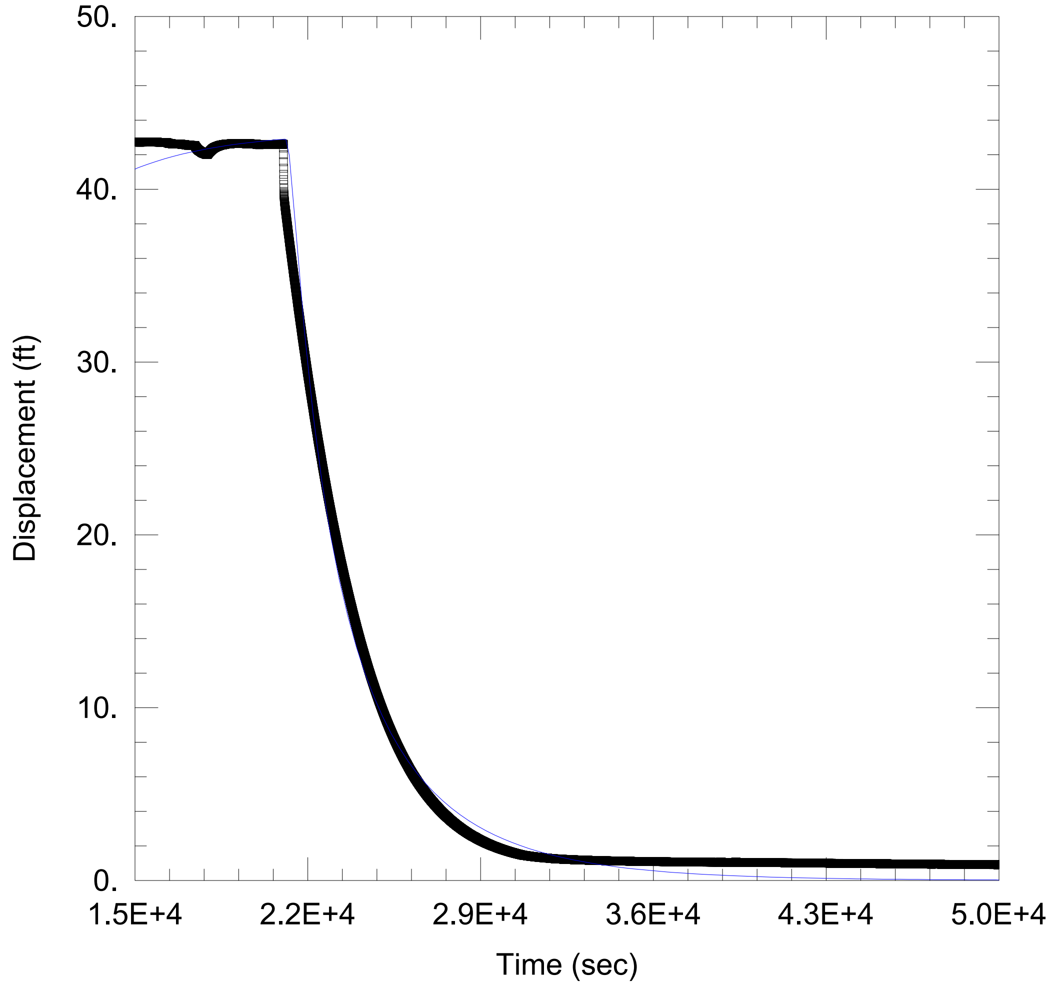
Observation Wells

Well Name	X (ft)	Y (ft)
□ HA20-CMT-6(OW)	0	0

SOLUTION

Aquifer Model: Leaky
Solution Method: Hantush-Jacob

T = 0.9914 ft^2/day
S = 0.0009436
r/B = 0.03592
Kz/Kr = 1.
b = 8. ft



WELL TEST ANALYSIS

Data Set: \...\HA20-CMT-6(OW)_Recovery.aqt
Date: 11/03/21 Time: 10:57:57

PROJECT INFORMATION

Company: H&A
Client: de maximis, inc.
Project: 131884-002
Location: Nuclear Metals Inc.
Test Well: HA20-CMT-6(OW)
Test Date: 4/21/2021

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
HA20-CMT-6(OW)	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
□ HA20-CMT-6(OW)	0	0

SOLUTION

Aquifer Model: Leaky
Solution Method: Hantush-Jacob

T = 0.2148 ft^2/day
S = 0.08496
r/B = 0.613
Kz/Kr = 1.
b = 8. ft

APPENDIX B

HB-2 - Seismic Analysis

PDI HB-2: Seismic Evaluation for Holding Basin Wall Design

1 Scope of Work

This Pre-Design Investigation (PDI) activity for the holding basin (HB) containment wall involves the seismic evaluation necessary to complete the Holding Basin containment wall design as outlined in the Record of Decision (ROD). Activities performed in accordance with the HB PDI Work Plan (Work Plan) to meet the objectives of this PDI include:

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin	Conduct Seismic Evaluation for Holding Basin Wall Design	• Drill six bedrock boreholes for cross-hole geophysics, forming two sets of 3-hole arrays for the geophysics. • Field shear wave measurements using cross-hole geophysical methods to characterize soil and bedrock to support the probabilistic seismic analysis to meet seismic design applicable or relevant and appropriate requirements (ARARs). • Conduct seismic analysis, determine design loads for containment wall in accordance with ASCE-7 design standards, and perform structural design of wall to resist design earthquake.

Based on 10 Code of Federal Regulations (CFR) Part 100, the closure remedy is intended to be designed to withstand an earthquake with a 2,475-year return period using guidance in ASCE-7. To meet the design parameters, Haley & Aldrich, Inc. (Haley & Aldrich) conducted work under this PDI including an assessment of the potential for surface deformation and faulting, preliminary review of liquefaction potential, and stability of the adjacent slope extending downward to both Cooling Pond and Sphagnum Bog. The analysis and results from this PDI will be incorporated into the containment wall design as a part of the 30% Remedial Design (30% RD).

2 Summary of Work

The scope of work completed as part of this PDI included:

- Drilling of six (6) bedrock borings for cross-hole geophysics. These bedrock boreholes were drilled 10 to 15 feet (ft) apart in a straight line for the completion of cross-hole seismic testing. The boreholes were drilled in two sets of three-hole arrays for cross-hole seismic testing. Note: Additional information on the installation of the bedrock borings can be found in the HB Summary Report and Appendix A – HB-1 Summary Report.

- Performance of cross-hole seismic testing (completed by Geophysical Applications) in general conformance with the ASTM D4428/D4428M-14, “Standard Test Methods for Crosshole Seismic Testing.” Note: Additional information on cross-hole seismic testing of the bedrock borings can be found in Appendix A – HB-1 Summary Report.

- Development of site-specific bedrock ground motions under the design earthquake using information provided by the U.S. Geological Survey Earthquake Hazards Program.

- Performance of a kinematic analysis to determine seismically induced wall bending moments.

- Preliminary evaluation of liquefaction potential of soils at the HB. This consists of simplified evaluations based on the PGAM (site adjusted ground surface acceleration) from generic site class or site-specific evaluations to reduce PGAM.
- Performance of pseudo-static slope stability analyses for the slope adjacent to the HB (based on seismic loading of 0.5*PGAM from generic site class or site-specific evaluations to reduce seismic loading). Note: The slope stability analysis is discussed in greater detail in Appendix D – HB-4 Summary Report.

An overview of activities is described in the following sections. Specific information pertaining to bedrock borehole installation, borehole geophysics field collection, sampling, and standard work procedures can be found in greater detail in the HB Summary Report. Boring locations are shown on Figure 1 of *HB Summary Report*, borehole logs are included in Exhibit HB1-2 of *Appendix A – HB-1 Summary Report*.

2.1 FIELD SHEAR WAVE VELOCITY DATA COLLECTION

In each of the three-(3) hole arrays (South Array and West Array), cross-hole seismic testing was performed to measure compressional-wave (P-wave) and shear-wave (S-wave) velocities in overburden and bedrock. These arrays were drilled and installed near the proposed containment wall that will be constructed and keyed into glacial till or bedrock. The cross-hole seismic survey was conducted by Geophysical Applications, Inc. in conformance with ASTM standard D4428-14, with some minor modifications as described below. In addition, full-waveform sonic logging of the bedrock intervals was completed. Details of the survey are included in Exhibit HB2-1.

The equipment utilized included Geostuff model BHG-2 and BHG-3 three (3)-component geophones, mechanically clamped into each borehole by an expandable metal arm. The three (3) geophone elements in each clamped geophone assembly were oriented in three (3) orthogonal directions (e.g. X, Y, and Z axes). Seismic energy was generated by a pneumatically clamped reversible hammer. The hammer included a packer assembly that expands to fit snugly inside the borehole and a sliding hammer that can impact the packer via either upward or downward blows. This allows reversing the polarity of S-waves and facilitates identification of the S-wave arrival times. An accelerometer affixed to the packer assembly triggers the engineering seismograph (ABEM Terraloc Mark 6) to begin recording.

Crosshole seismic data was recorded at 5-ft depth (or elevation) increments, per the American Society for Testing and Materials (ASTM) standard, to a depth of 150 ft below ground surface. In this case, the data collection began at the deepest test location, and the geophone/source assemblies were then raised by 5-ft intervals for each subsequent test. Data reduction was accomplished in a manner consistent with the ASTM standard, using Excel spreadsheets that calculate both the raypath distances between adjacent boreholes at each test depth (using the verticality observations described below) and P/S-wave velocities (by dividing the raypath distances by the measured seismic-arrival times). Seismic arrival-time measurements were obtained either directly from the ABEM seismograph (using its built-in software) or Rimrock Geophysics' SIPT seismic-processing software.

The verticality of each borehole was evaluated prior to crosshole-seismic testing, as part of the borehole geophysics (described in Appendix A – HB-1 Summary), with one of the televiewer logging probes (ALT model ABI40 or OBI40) that was utilized during the bedrock-borehole logging. These probes contain triaxial magnetometers and triaxial accelerometers to track borehole deviation from vertical and magnetic north. The televiewer logs were recorded at 0.015-ft depth increments, throughout the accessible depth range of each borehole.

The boreholes were arranged in a straight line, but the verticality of each borehole was required to be determined so that the actual raypath distance between each borehole (at each test depth) is known. Typically, boreholes deviate somewhat from vertical, and that deviation can result in significant lengthening or shortening of the inter-borehole separation distances, versus the 12- or 15-ft spacings at the ground surface at the NMI locations.

Full-waveform sonic (FWS) velocity logging was performed at each borehole in each of the three-hole arrays, prior to the crosshole seismic measurements. A Mount Sopris model 2SAA-1000 full-waveform sonic probe was used to provide these data. This probe included a single transmitter, and two (2) receivers. The two (2) receivers allowed measurement of P and S-wave interval velocities (i.e., between the two (2) receivers). A 3-ft long rubber acoustic-isolation section between the transmitter and receiver portions of the probe assured that seismic velocities were measured via the formation around the borehole, and not simply through the probe body itself.

FWS data was recorded at 0.3281-ft (0.1-meter) depth intervals, with a logging speed of 8 ft per minute. The transmitter was set to produce a 20 kilohertz (kHz) output signal, to optimize velocity measurements in the bedrock portion of each borehole. Fixed gain control was utilized during the downward run, and automatic gain control (AGC) was utilized during the upward run. Functional operation of the FWS transmitter was checked prior to each logging run (it will produce an audible clicking sound when the probe is aboveground). Post-survey data reduction (to calculated P- and S-wave velocities versus logged depth) were completed by Geophysical Applications, with a full-waveform sonic-velocity module in ALT's WellCAD software. The resulting sonic-velocity data is included in Exhibit HB2-1.

2.2 BEDROCK GROUND MOTIONS

Kaklamanos Consulting, LLC developed a suite of input bedrock ground motions using the guidelines in ASCE-7. Consistent with these guidelines, bedrock ground motions were provided for the risk-targeted maximum considered earthquake (MCE_R) which corresponds to a 1% collapse risk in 50 years and were developed from the U.S. Geological Survey seismic hazard maps for a 2% probability of exceedance in 50 years (i.e., a 2,475-year return period). Details of this analysis are included in Exhibit HB2-2.

The MCE_R bedrock response spectrum was calculated for Site Class A (hard rock) conditions at the project location. Site Class A conditions are generally representative of bedrock conditions in the Central and Eastern United States. The MCE_R response spectrum for Site Class A was used as a target response spectrum for the selection of input bedrock ground motions. The deaggregations of the seismic hazards were then calculated using the USGS website to determine the magnitudes and distances of earthquakes that contribute most to the seismic hazard at the project location. A set of bedrock ground motions was selected and scaled to match the MCE_R target response spectrum using the Pacific Earthquake Engineering Research Center (PEER) NGA-East database.

A suite of 11 input bedrock ground motions (time histories of acceleration) was provided by Kaklamanos Consulting to Haley & Aldrich for use in kinematic analysis of the containment wall and other seismic evaluations (e.g., site response analysis).

3 Deviations from Work Plan

There were no significant deviations from the Work Plan. The analysis to be conducted for evaluating loads to the containment wall due to ground motions will be documented in the 30% RD.

4 Results

4.1 BOREHOLE GEOPHYSICS

As described above, the details of the borehole geophysics investigation, excluding the verticality measurements used for the field compressional and shear wave velocity calculations, is included in Exhibit HB1-2 in Appendix A – HB-1 Summary.

4.2 FIELD COMPRESSIONAL AND SHEAR WAVE VELOCITIES

At the South Array, P-wave velocities ranged from 941 ft/s to 19,518 ft/s, and S-wave velocities ranged from 667 ft/s to 8,541 ft/s. No S-wave velocities were measured from 5 to 30 ft depth and at 85 ft depth. The average s-wave velocity of the top 100 ft (V_{s100}) for the South Array data is likely greater than 600 ft/s, which corresponds to the lower end for Site Class D conditions if soils are not liquefaction susceptible (which will be determined during design calculations).

At the West Array, P-wave velocities ranged from 1,036 ft/s to 21,935 ft/s, and S-wave velocities ranged from 836 ft/s to 11,996 ft/s. No P-wave velocities were measured at 5 and 80 ft depth. No S-wave velocities were measured from 5 to 10 ft depth and at 80 ft depth. The V_{s100} for the West Array data is likely greater than 600 ft/s which corresponds to the lower end for Site Class D conditions if soils are not liquefaction susceptible.

4.3 SEISMIC ANALYSIS

Based on the subsurface information and s-wave velocity data, Site Class D conditions can be assumed for the project site. For Site Class D, the MCE_G design accelerations are:

- PGA = 0.109 g;
- F_{PGA} = 1.582; and
- PGA_M = 0.172 g.

Where:

- PGA is the mapped MCE_G peak ground acceleration;
- F_{PGA} is the Site coefficient;
- PGA_M is the Site adjusted ground surface acceleration; and
- g is the acceleration due to gravity.

The generic (code-based) MCE_R seismic design parameters for the site for Site Class D conditions are:

- S_s = 0.214 g;
- S_1 = 0.070 g;
- F_a = 1.6;
- F_v = 2.4;
- S_{MS} = 0.342 g;

- S_{M1} = 0.168 g;
- S_{DS} = 0.228 g; and
- S_{D1} = 0.112g.

5 Summary of Future Design Considerations

5.1 CONTAINMENT WALL

Results of seismic analyses described above will be used in kinematic analyses performed to evaluate seismically induced bending moments within the containment wall during the design earthquake. The kinematic analyses will be used to assist with structural design of the wall, including developing recommendations for minimum backfill strength, minimum wall thickness, potential use of plastic concrete backfill that can accommodate bending, and the need for reinforcing in the wall. Backfill, in the context of the containment wall, will be the proposed mix identified to meet the design criteria (described in more detail within Appendix C – HB-3 Bench Scale Testing of Slurry and Wall Mix Designs). The wall will be constructed under slurry with 100 percent replacement of excavated material.

5.2 LIQUEFACTION POTENTIAL

The PGA_M developed for the site will be used to confirm that soils at the Holding Basin are not susceptible to liquefaction under the design earthquake with the calculated seismic demand. The minimum required factor of safety against liquefaction is assumed to be 1.10. If the site soils are found to be liquefaction susceptible, site-specific response analysis is required under ASCE 7.

5.3 GLOBAL STABILITY ANALYSES

One-half of the PGA_M developed for the site will be used in pseudo-static global stability analyses to evaluate slopes adjacent to the Holding Basin (extending downward to the Cooling Pond and bog) under the design earthquake.

For preliminary pseudo-static global stability evaluations, the seismic load will be calculated using a horizontal seismic acceleration equal to 0.086 g, which is 50% of the PGA_M (0.172 g). If the soils at the site are found to be liquefaction susceptible in the previous step, the seismic load (i.e., PGA) and soil strength parameters (e.g., liquefied parameters) will be updated to consider the results of the site-specific response analysis. A site-specific response analysis could potentially lower the seismic load to a point that soil liquefaction or slope instability problems are eliminated.

For the design of the containment wall, kinematic analysis will be performed to estimate bending moments due to the curvatures imposed by the earthquake motions. Test boring and S-wave velocity data will be used to construct idealized soil profile/s and estimate the dynamic soil properties. The bedrock ground motions will then be used together with the idealized soil profile and containment wall properties in a soil-structure interaction analysis to calculate the seismically induced bending moments.

ATTACHMENTS

EXHIBITS

Exhibit HB2-1 – Cross-Hole Seismic Report, prepared by Geophysical Applications, Inc., dated 16 December 2021

Exhibit HB2-2 – Input (Bedrock) Motion Selection: NMI, prepared by Kaklamanos Consulting, LLC, dated 11 December 2021

EXHIBIT HB2-1

Cross-Hole Seismic Report, prepared by Geophysical Applications, Inc., dated 16 December 2021

Crosshole Seismic Velocity Measurements
Former Nuclear Metals, Inc. Superfund Site
Holding Basin Vicinity
Concord, Massachusetts

Prepared for
HALEY & ALDRICH, INC.
December 2021

GEOPHYSICAL APPLICATIONS

GEOPHYSICAL
APPLICATIONS
INCORPORATED

December 17, 2021

Mr. Mark Kelley, P.E.
HALEY & ALDRICH, INC.
465 Medford Street – Suite 2200
Boston, MA 02129-1400

Subject: Crosshole Seismic Velocity Measurements
Former Nuclear Metals, Inc. Superfund Site
Holding Basin Vicinity
Concord, Massachusetts

Office: 617-886-7338
Email: MKelley@haleyaldrich.com

Dear Mr. Kelley:

Geophysical Applications has performed crosshole-seismic surveys to help characterize subsurface conditions at the above-noted site. Fieldwork was performed at two arrays, located adjacent to the south and west sides of the former holding basin. Each array consisted of three boreholes drilled in approximately a straight line.

The purpose of this study was to measure the compressional (P) and shear (S) wave velocities that can help determine in situ engineering properties for near-surface geologic materials.

The crosshole seismic method, and results of this survey, are described below.

SURVEY CONTROL

The crosshole array located south of the former holding basin included the following three boreholes (approximate total depths within each PVC-cased borehole are in feet below ground surface):

GP-101 (142.7 feet)

GP-102A (151.9 feet)

GP-103 (152.0 feet)

The array located west of the former holding basin included the following three boreholes (approximate total depths are in feet below ground surface):

GP-104 (154.5 feet)

GP-105 (156.6 feet)

GP-106 (153.0 feet)

Ground and casing-top elevation differences between these wells were measured with a Pentax electronic theodolite and a fiberglass leveling rod. Horizontal distances between adjacent boreholes at each array were measured with a fiberglass measuring tape.

The depths of the seismic source device (a pneumatically-clamped packer/hammer assembly) and receiver geophones were measured using fiberglass measuring tapes. Geophone depths in the receiver boreholes were adjusted using the previously-measured top-of-casing elevations, so as to have the seismic source and geophones at the same elevation, for each test depth in each array.

METHODS OF INVESTIGATION

Crosshole seismic measurements allow measurement of in situ P- and S- wave velocity values for shallow fill, overburden and bedrock. This geophysical technique is well described in published literature and an ASTM testing standard. The current ASTM standard for this test is D 4428/D 4428 M – 14. This document describes equipment requirements, borehole preparation, data reduction and interpretation, as well as other details for this type of testing. The crosshole seismic survey described in this report was planned and performed mostly in accordance with this ASTM standard.

The spacing between the source and closest-receiver boreholes was increased slightly from the ASTM recommendation of 10 feet, to help measure P-wave arrival times in what was expected to be relatively high-velocity bedrock. The inter-borehole spacing at the south array was approximately 11 feet; the inter-borehole spacing at the west array was approximately 12 feet.

Each borehole was completed with three-inch diameter PVC casing. Per the ASTM Standard, rigid grout coupled the PVC casing to bedrock, in the deeper portions of each borehole. Non-rigid grout was used between the PVC casing and overburden at shallower depths.

The ASTM standard states that borehole deviation surveys may not be necessary if borehole deviations of less than 1 foot are assumed or anticipated, and the borehole depths do not exceed 40 feet. This limited borehole deviation would result in velocity estimates that are within $\pm$ 10% of actual velocity values. For the present study, with borehole depths of approximately 150 feet, a verticality survey was required.

Prior to conducting the crosshole-seismic testing, a verticality survey was conducted within each borehole to determine the actual horizontal distance between boreholes at each crosshole test elevation. This information accounts for normal borehole drift that occurs during the drilling process. Verticality data was obtained using a Mount Sopris model 4MXB geophysical logging winch, an Advanced Logic Technology (ALT) model OBI40-MK4 optical televiewer probe, and an ALT ABox electronics console. The OBI40 probe contains triaxial accelerometers and triaxial magnetometers that allow calculations of a borehole's orientation with respect to both vertical and magnetic north. The probe was centralized in each borehole, and verticality data were acquired at 0.007-foot depth intervals.

Verticality data analysis was accomplished using a deviation module in ALT's WellCAD software package. That software calculated eastings, northings, and true vertical depth (TVD) coordinates for each borehole at each sample depth. Inter-borehole distances were subsequently calculated in an Excel spreadsheet, using a formula provided in the ASTM Standard, at each of the crosshole-test depths.

During crosshole testing, seismic energy was generated with a mechanical "packer" energy source constructed by Geophysical Applications. This tool is a bi-directional mechanical hammer that allows the input of seismic energy with both upward and downward hammer blows. This packer assembly is pneumatically-clamped to the borehole interior, and provides significant advantages for interpreting the arrival of S-wave energy; by reversing the direction of energy generation, the S-wave polarity is reversed. Because the S-wave can thus be uniquely identified on seismograph recordings, more-accurate shear wave arrival time measurements can typically be accomplished.

Seismic data were recorded at 5-foot depth intervals within each three-hole array using an ABEM Terraloc Mark 6 engineering seismograph. Because triaxial geophones are used in each of the two receiver boreholes, each seismogram includes three traces per receiver hole (i.e., one vertical sensor, and longitudinal and transverse horizontal sensors). Mechanically-clamped GeoStuff triaxial borehole geophones were used in each of the two receiver boreholes during this survey. The seismograms were samples at 0.1-millisecond intervals, with a total record length of approximately 100 milliseconds.

The seismograms were subsequently examined to determine the arrival times for P- and S-waves between the seismic source and receiver positions. During this data interpretation process, it was noted that despite the small time-sampling interval, there was little time difference between P-wave arrival times at the two receiver boreholes (apparently due to the relatively high-velocity bedrock). That resulted in calculated velocity values being relatively high, and erratic (i.e., a small difference in traveltime resulted in large variations in calculated seismic velocity values).

Consequently, one borehole at each of the two arrays was logged with a Mount Sopris model 2SAA1000 full-waveform sonic (FWS) probe, in an effort to obtain more-accurate P-wave velocities. The two FWS-logged wells were HA20-GP-103 (south array) and HA20-GP-105 (west array). The FWS logs were obtained in conjunction with the Mount Sopris logging winch and MGX electronics console.

The FWS probe includes one transmitter and two receivers; the receivers are respectively three and four feet from the transmitter. A three-foot long flexible rubber section acoustically isolates the transmitter from the receivers. This probe was positioned near the middle of each borehole by centralizers mounted on the two rigid sections of the probe (i.e., one centralizer on the transmitter section, and another on the receiver section). Note that this device can only be operated in the water-filled portion of a borehole; water is needed to transmit seismic waveforms between the logging probe and the PVC casing.

FWS data were recorded at 0.3185-foot depth increments, with a variety of transmitter frequencies and amplifier gain settings. Within the bedrock portion of each logged well, a transmitter frequency of 15 to 20 kHz (kilohertz) and automatic gain control (AGC) settings appeared to yield good data quality. A lower transmitter frequency (7 kHz) was utilized in the overburden portions of the FWS-logged wells. FWS data-quality within the overburden depth ranges was not always satisfactory, partly due to the PVC casing having higher velocity than the overburden, and partly due to the rapid attenuation of the relatively high-frequency sonic waveforms in the non-rigid grout and overburden. Each waveform (i.e., at each receiver and at each sample depth) was recorded with a hold-off time of 50 microseconds (in bedrock), or 100 or 200 microseconds (in overburden), and 256 samples at 4-microsecond intervals (in bedrock) or 8-microsecond intervals (in overburden). Post-survey data processing (including filtering and stacking the waveforms, semblance analysis, and manual identification of P and S-wave velocities) was performed using a FWS module in the WellCAD software package.

RESULTS

Velocity Calculations

Velocities for P- and S-waves at each array (see Table 1) were calculated via the following process:

1. Crosshole seismogram recordings were reviewed to determine the P- and S-wave arrival times.
   a) P-waves were interpreted as the earliest coherent seismic waveform that could be detected. These are the highest velocity waves, and typically exhibit relatively high-frequency and low-amplitude waveforms.
   b) S-waves were identified by their polarity reversal from the bi-directional seismic energy source. S-waves are typically low-frequency and high-amplitude waveforms.

2. Using the timing scale provided by the digital seismograms, the arrival time was determined for each waveform at each receiver borehole. The waveforms usually appear more clearly on only one or two of the three sensors in each borehole (normally, on the vertical and one of the horizontal geophone elements). Because of the packer device's vertical orientation, shear waves are usually most pronounced on the vertical geophone elements.

3. P- and S-wave velocity values were then computed by dividing the distances between source and receiver boreholes (as calculated from the verticality data), by the arrival time for the P- and S-waves. These calculations were performed in several manners (i.e., using the distances and arrival times between the source and each receiver, and also between each of the two receiver boreholes. In cases where there was disagreement between P or S-wave velocities computed at a specific test depth, the velocity values included in the accompanying table were selected for consistency with adjacent test depths, and a qualitative evaluation regarding whether they were reasonable for the earth materials at that depth.

4. P- and S-wave velocity values measured within bedrock by the FWS probe were substituted for the crosshole measurements, at depths where we judged that the crosshole-derived velocities were geologically unrealistically high or erratic.

Blank cells in this table indicate depths for which a confident seismic arrival time (from the crosshole measurements) or velocity value (from FWS logging) could not be ascertained. In particular, at the shallowest test depths (i.e., likely within fill materials), S-wave arrival times could not always be confidently ascertained.

Near 80 to 85 feet deep at each array, a couple of seismic arrival times could not be confidently identified (possibly due to P or S-waves traveling along refracted paths, instead of directly from the seismic source to the receiving geophones).

* * * * *

Please call the undersigned at 508/429-2430 if you have questions regarding our report. We appreciate this opportunity to provide geophysical services to Haley and Aldrich, and we welcome inquiries regarding this survey.

Sincerely,
GEOPHYSICAL APPLICATIONS, INC.

M. Blackey

Mark E. Blackey
Principal and Geophysicist

1201727 crosshole rpt.doc

Table 1 - Calculated P & S-wave Velocity Values

South Array

Depth (feet)	P-wave velocity (ft/sec)	S-wave velocity (ft/sec)
5	1039	
10	941	
15	1184	
20	2012	
25	1131	
30	1623	
35	1982	774
40	1160	712
45	3936	780
50	4268	909
55	4666	723
60	5824	667
65	6989	1494
70	7738	1658
75	6288	1600
80	8864	1937
85	7188	
90	10675	5085
95	16368	7339
100	12520	5683
105	11458	7860
110	11907	6487
115	11458	6634
120	12520	6906
125	12783	6710
130	13343	6826
135	12520	6906
140	9791	5952
145	10118	6835
150	19394	8856

West Array

Depth (feet)	P-wave velocity (ft/sec)	S-wave velocity (ft/sec)
5		
10	1167	
15	1036	836
20	1258	983
25	1210	897
30	1218	909
35	1165	1001
40	1282	852
45	1312	1096
50	5341	1413
55	5880	1443
60	6982	1406
65	7439	1471
70	4178	1311
75	5515	1127
80		1074
83	7636	
90	5627	2075
95	4767	2060
100	4737	2588
105	12296	6413
110	13587	9327
115	15429	9087
120	15970	10424
125	17676	10127
130	18964	11966
135	18578	11578
140	17015	9528
145	17339	10548
150	17015	10127

EXHIBIT HB2-2

Input (Bedrock) Motion Selection: NMI, prepared by Kaklamanos Consulting, LLC, dated 11 December 2021

INPUT (BEDROCK) MOTION SELECTION: NUCLEAR METALS, INC.

Concord, Massachusetts
Haley & Aldrich, Inc., File No. 131884-002

Kaklamanos Consulting, LLC

James Kaklamanos, Ph.D., Manager
41 Pinebrook Road
Nashua, New Hampshire 03062
Tel: 603-801-2211
Email: Jim.Kaklamanos@gmail.com
Web: www.kaklamanos.com

Date: 11 December 2021

Submitted to:

Mark Kelley, P.E.
Haley & Aldrich, Inc.
465 Medford Street, Suite 2200
Boston, Massachusetts 02129

Table of Contents

1 Introduction

Kaklamanos Consulting, LLC, has undertaken the development of a suite of input rock ground motions for site-specific ground response analyses for the Nuclear Metals, Inc. Superfund site in Concord, Massachusetts. The selected ground motions were optimized within the spectral period range of interest for a holding basin containment wall to be designed. As specified in the work plan dated 4 September 2020, the ground motion development was undertaken in accordance with the Ninth Edition of the Massachusetts State Building Code (2017). The Ninth Edition of the Massachusetts State Building Code consists of amendments to the 2015 International Building Code [IBC] (ICC, 2015); Chapter 16 (Structural Design) contains the seismic provisions relevant to these analyses. In turn, the 2015 IBC largely incorporates the seismic guidelines of ASCE 7-10 design standards (ASCE, 2010). Within ASCE 7-10, the following chapters are needed: Chapter 11 (Seismic Design Criteria), Chapter 20 (Site Classification Procedure for Seismic Design), Chapter 21 (Site-Specific Ground Motion Procedures for Seismic Design), and Chapter 22 (Seismic Ground Motion Long-Period Transition and Risk Coefficient Maps). From the perspective of input motion selection and site response analyses, the ASCE 7-10 design standards are very similar in procedure and form to the more recent ASCE 7-16 design standards (ASCE, 2016).

Consistent with these guidelines, bedrock ground motions will be provided for the risk-targeted maximum considered earthquake ground motion response acceleration (MCE_R), which corresponds to a 1% collapse risk in 50 years. Within ASCE 7-10, Section 21.1.1 (Base Ground Motions) presents the following language relevant to the selection of input (bedrock) ground motions):

> A MCE_R response spectrum shall be developed for bedrock, using the procedure of Sections 11.4.6 or 21.2. Unless a site-specific ground motion hazard analysis described in Section 21.2 is carried out, the MCE_R rock response spectrum shall be developed using the procedure of Section 11.4.6 assuming Site Class B. If bedrock consists of Site Class A, the spectrum shall be adjusted using the site coefficients in Section 11.4.3 unless other site coefficients can be justified. At least five recorded or simulated horizontal ground motion acceleration time histories shall be selected from events having magnitudes and fault distances that are consistent with those that control the MCE_R ground motion. Each selected time history shall be scaled so that its response spectrum is, on average, approximately at the level of the MCE_R rock response spectrum over the period range of significance to structural response.

This language was used to guide the analyses presented in this report. Subsequently, Sections 21.1.2 (Site Condition Modeling) and 21.1.3 (Site Response Analysis and Computed Results) of ASCE 7-10 contain language relevant to the subsequent site-specific ground response analyses in which the provided input (bedrock) motions will be used.

First, the MCE_R bedrock response spectrum was computed for Site Class A (hard rock) at the project location. Note that MCE_R refers to the risk-targeted maximum considered earthquake ground motion response acceleration; the MCE_R spectrum is used as the target response spectrum for the selection and scaling of input motions. Second, deaggregations of the seismic hazards were calculated using the U.S. Geological Survey (USGS) website to determine the magnitudes and distances of earthquakes that dominate the seismic hazards at the project location. Third, a set of ground motions was selected and scaled to match the target response spectrum over the period range of interest using the Pacific Earthquake Engineering Research Center (PEER) NGA-East database (Goulet et al., 2014). These ground motions were selected to represent earthquakes that most greatly contribute to site-specific seismic hazard. To provide a stronger match to the target response spectrum, eleven (11) input motions have been provided in this report, which exceeds the minimum of five rock motions required by ASCE 7-10. These input motions were then converted for compatibility with the program DEEPSOIL (Hashash et al., 2018) that will be used in subsequent site-specific ground response analyses.

2 Target Response Spectrum

The first step in selecting input rock motions is to develop the target response spectrum according to the specifications of the Massachusetts State Building Code (Ninth Edition), IBC 2015, and ASCE 7-10. The ASCE 7-10 guidelines in Section 21.1.1 provide two methods for developing a MCE_R bedrock response spectrum: by multiplying the design response spectrum by 1.5 (Section 11.4.6), or by performing a site-specific probabilistic seismic hazard analysis (Section 21.2). The former procedure is used herein.

A MCE_R response spectrum represents the risk-targeted maximum considered earthquake ground motion response acceleration, which corresponds to a 1% collapse risk in 50 years (Luco et al., 2007). Ground-motion values consistent with the MCE_R are provided in ASCE 7-10, and they correspond to 1.5 times the design-level ground motions (ASCE, 2010). It is important to note that the MCE_R bedrock response spectrum, not the design-level response spectrum, is used as the target spectrum for ground-motion selection. The MCE_R ground-motion values in ASCE 7-10 are derived from the 2008 United States Geological Survey [USGS] seismic hazard maps (uniform hazard spectra) for a 2% probability of exceedance in 50 years (Petersen et al., 2008), corresponding to a return period of 2,475 years. To derive the MCE_R ground motion values in ASCE 7-10, the 2008 USGS seismic hazard maps are adjusted for the maximum direction of horizontal shaking rather than the geometric mean, and further adjusted using a risk coefficient to convert the ground-motion hazard spectrum into a risk spectrum (Zimmerman et al., 2017).

The procedure for computing the MCE_R bedrock response spectrum, as presented in Section 11.4 of ASCE 7-10, may be summarized as follows:

1. Determine the mapped MCE_R spectral response acceleration parameters (S_S and S_1) that represent the seismic hazards at the project location for reference site conditions (Site Class B in ASCE 7-10).
2. Determine the site class that represents bedrock at the project location (here, Site Class A, to be explained shortly).
3. Adjust the MCE_R spectral response acceleration parameters for site class effects (S_{MS} and S_{M1}).
4. Compute the design spectral acceleration parameters (S_{DS} and S_{D1}; equal to two-thirds of S_{MS} and S_{M1}, respectively) and the design response spectrum.
5. Multiply the design response spectrum by 1.5 to obtain the MCE_R bedrock response spectrum.

Mapped MCE_R spectral response acceleration parameters (S_S and S_1)

The mapped acceleration parameters represent the seismic hazards at the project location for conditions consistent with Site Class B: S_S = mapped MCE_R spectral response acceleration parameter at short periods, and S_1 = mapped MCE_R spectral response acceleration parameter at a period of 1 s (assuming 5% damping). Values of S_S and S_1 for ASCE 7-10 are available on the USGS seismic design web services (https://earthquake.usgs.gov/ws/designmaps/) as a function of latitude and longitude for the site of interest. However, the Massachusetts State Building Code overrides the IBC and ASCE 7 by specifying a town-by-town list of S_S and S_1; for Concord, the Ninth Edition of the Massachusetts State Building Code specifies $\mathbf{S_S = 0.214}\boldsymbol{g}$ and $\mathbf{S_1 = 0.070}\boldsymbol{g}$ (Figure 1). For the project location in Concord, Massachusetts (Latitude: 42.4412°, Longitude: −71.4201°), the ASCE 7-10 USGS seismic design web services output provides consistent output (at least to two decimal places). For reference, the full output of the USGS seismic design calculator is available in Appendix A of this report.

TABLE 1604.11 SNOW LOADS, WIND SPEEDS, AND SEISMIC PARAMETERS

	SNOW LOADS		BASIC WIND SPEED, V_{ult} (mph)			SEISMIC PARAMETERS (g)	
City/Town	Ground Snow Load, P_g (psf)	Minimum Flat Roof Snow Load, P_f[1] (psf)	Risk Category I	Risk Category II	Risk Category III or IV	S_s	S_1
Concord	50	35	114	125	136	0.214	0.070

Figure 1. Seismic parameters for Concord, Mass., specified by the Ninth Edition of the Massachusetts State Building Code (2017).

Site class for bedrock conditions

Input bedrock motions (acceleration time series) were selected for **Site Class A** (hard rock) conditions, which are representative of bedrock conditions in the Central and Eastern United States (e.g., Hashash et al., 2014). For the hard rock encountered in New England (compared to the much softer rock found in active tectonic regions in the western U.S.), there is no compelling reason to assume any conditions other than Site Class A. Upon review of the boring logs for the project site, the encountered bedrock (largely Assabet Quartz Diorite and Acton/Andover Granite) was described as hard to very hard. According to Table 20.3-1 of ASCE 7-10, the shear-wave velocities in Site Class A materials (hard rock) are expected to exceed 1500 m/s. The shear-wave velocity measurements in bedrock on site (measured by Geophysical Applications, Inc. using the crosshole method) exceed 1500 m/s, reaching up to 2600 m/s in the south array and 3600 m/s in the west array. For all these reasons, Site Class A is the best possible assumption for the bedrock conditions.

Site-adjusted MCE_R spectral response acceleration parameters (S_{MS} and S_{M1})

The site coefficients are used to convert S_S and S_1 from the reference site condition (Site Class B) to the site conditions at the location of interest (here, Site Class A): F_a = short-period site coefficient, and F_v = long-period site coefficient. Tables 11.4-1 and 11.4-2 in ASCE 7-10 [replicated as Tables 1613.3.3(1) and 1613.3.3(2) in the 2015 IBC] provide the site coefficients for different site classes and ground-motion levels. For Site Class A and the mapped values of S_S and S_1, Figure 2 indicates that all site coefficients are equal to 0.8: $F_a = 0.8$ and $F_v = 0.8$. The MCE_R spectral response acceleration parameters adjusted for site class effects (S_{MS} and S_{M1}) are obtained by multiplying S_S and S_1 by the corresponding site coefficient:

$$S_{MS} = F_a S_s$$

$$S_{M1} = F_v S_1$$

Multiplying S_S and S_1 by 0.8, we have: $S_{MS} = F_a\, S_S = (0.8)(0.214g) = \mathbf{0.1712g}$ and $S_{M1} = F_v\, S_1 = (0.8)(0.070g) = \mathbf{0.0560g}$.

Table 11.4-1 Site Coefficient, F_a

Site Class	Mapped Risk-Targeted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration Parameter at Short Period				
	$S_S \le 0.25$	$S_S = 0.5$	$S_S = 0.75$	$S_S = 1.0$	$S_S \ge 1.25$
A	$\boxed{0.8}$	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7				

Note: Use straight-line interpolation for intermediate values of S_S.

Table 11.4-2 Site Coefficient, F_v

Site Class	Mapped Risk-Targeted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration Parameter at 1-s Period				
	$S_1 \le 0.1$	$S_1 = 0.2$	$S_1 = 0.3$	$S_1 = 0.4$	$S_1 \ge 0.5$
A	$\boxed{0.8}$	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	See Section 11.4.7				

Note: Use straight-line interpolation for intermediate values of S_1.

Figure 2. Screenshot of the site coefficient tables from ASCE 7-10 (ASCE, 2010).

MCE_R bedrock response spectrum

The design spectral response acceleration parameters are equal to two-thirds of the MCE_R spectral response acceleration parameters adjusted for site class effects: $S_{DS} = \frac{2}{3} S_{MS}$ and $S_{D1} = \frac{2}{3} S_{M1}$. The ASCE 7-10 design response spectrum, which is a plot of the design spectral response acceleration (S_a) versus spectral period (T), is determined by the following piecewise equation, plotted graphically in Figure 3:

$$S_a(T) = \begin{cases} S_{DS}\left(0.4 + 0.6\dfrac{T}{T_0}\right) & \text{for } T < T_0 \\ S_{DS} & \text{for } T_0 \leq T \leq T_S \\ \dfrac{S_{D1}}{T} & \text{for } T_S < T \leq T_L \\ \dfrac{S_{D1}T_L}{T^2} & \text{for } T > T_L \text{, where} \end{cases}$$

the breakpoints between the four regions correspond to $T_0 = 0.2\frac{S_{D1}}{S_{DS}}$, $T_S = \frac{S_{D1}}{S_{DS}}$, and T_L is the long-period transition period provided in Figure 22-12 of ASCE 7-10.

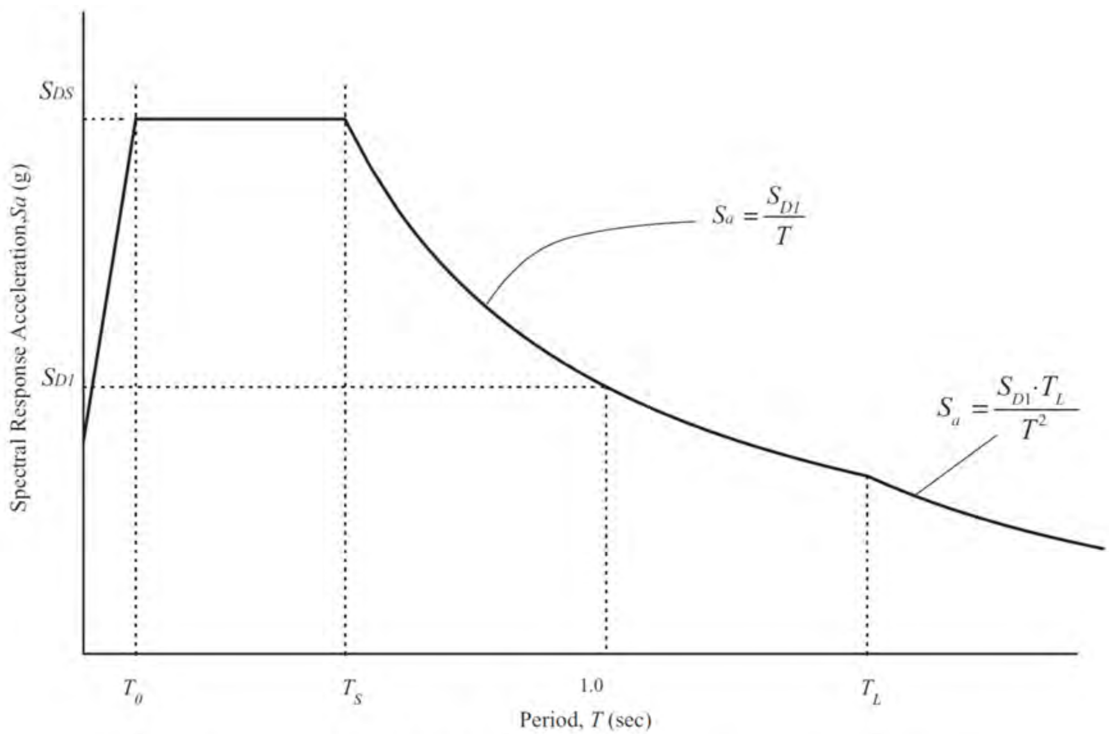


FIGURE 11.4-1 Design Response Spectrum.

Figure 3. ASCE 7-10 design response spectrum (ASCE, 2010).

For input motion selection, however, the MCE$_R$ bedrock response spectrum must be used. The MCE$_R$ response spectrum is determined by multiplying the design response spectrum by 1.5. Multiplying the design response spectrum by 1.5 essentially converts the equation from being written in terms of S_{DS} and S_{D1} to being written in terms of $S_{MS} = 1.5S_{DS}$ and $S_{M1} = 1.5S_{D1}$.

Using the ASCE 7-10 notation for S_{aM}, the site-specific MCE_R spectral response acceleration ($S_{aM} = 1.5S_a$), and multiplying the design response spectrum equation by 1.5, we have:

$$S_{aM}(T) = \begin{cases} S_{MS}\left(0.4 + 0.6\dfrac{T}{T_0}\right) & \text{for } T < T_0 \\ S_{MS} & \text{for } T_0 \le T \le T_S \\ \dfrac{S_{M1}}{T} & \text{for } T_S < T \le T_L \\ \dfrac{S_{M1}T_L}{T^2} & \text{for } T > T_L \text{ , where} \end{cases}$$

the breakpoints between the four regions correspond to $T_0 = 0.2\frac{S_{M1}}{S_{MS}}$, $T_S = \frac{S_{M1}}{S_{MS}}$, and T_L is the same as previously defined. For Concord, Massachusetts, Figure 4 (marked up from Figure 22-12 from ASCE 7-10) indicates that the long-period transition period (T_L) is equal to 6 sec.

Substituting the MCE_R spectral response acceleration parameters for Site Class A bedrock in Concord, Massachusetts, the MCE_R response spectrum may be defined by the following piecewise equation, where S_{aM} is in units of g, and T is in units of seconds:

$$S_{aM}(T) = \begin{cases} 0.0685 + 1.570\,T & \text{for } T < 0.065 \text{ s} \\ 0.1712 & \text{for } 0.065 \le T \le 0.327 \text{ s} \\ \dfrac{0.0560}{T} & \text{for } 0.327 < T \le 6 \text{ s} \\ \dfrac{0.3360}{T^2} & \text{for } T > 6 \text{ s} . \end{cases}$$

The MCE_R peak ground acceleration (PGA) is $0.0685g$, which corresponds to the spectral acceleration at $T = 0$. A plot of the MCE_R bedrock response spectrum (Site Class A) for the project location is shown graphically in Figures 5 and 6 (using logarithmic- and linear-scale axes, respectively) and in numerical form in Table 1 and in the spreadsheet supplied with this report. This spectrum will serve as the target response spectrum for input motion selection and scaling.

FIGURE 22-12 Mapped Long-Period Transition Period, T_L (s), for the Conterminous United States.

Figure 4. Determination of T_L for Concord, Massachusetts (adapted from ASCE [2010]).

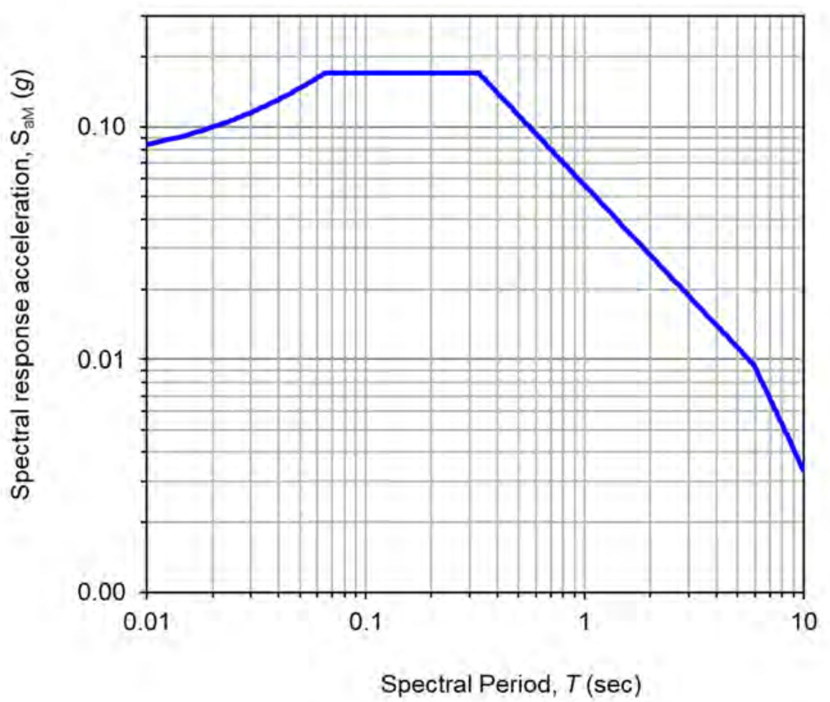


Figure 5. ASCE 7-10 MCE_R bedrock response spectrum (Site Class A) to be used as the target spectrum for input motion selection and scaling (plotted with logarithmic-scale axes).

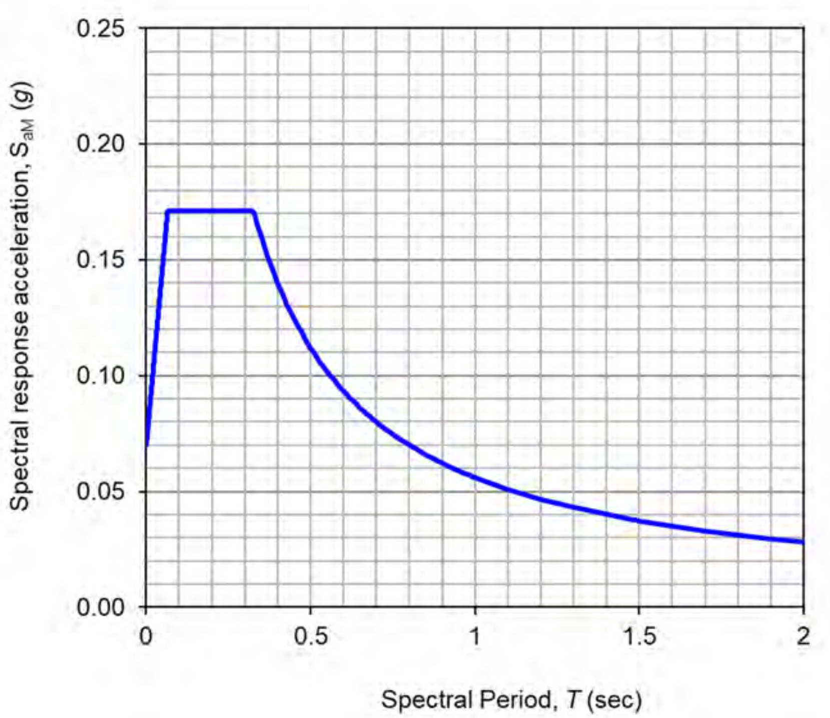


Figure 6. ASCE 7-10 MCE_R bedrock response spectrum (Site Class A) to be used as the target spectrum for input motion selection and scaling (plotted with linear-scale axes).

Table 1. ASCE 7-10 MCE_R bedrock response spectrum (Site Class A)

Spectral Period, T (s)	Site-specific MCE_R spectral response acceleration, S_{aM} (g)
0.000	0.0685
0.010	0.0842
0.020	0.0999
0.030	0.1156
0.040	0.1313
0.050	0.1470
0.065	0.1712
0.075	0.1712
0.100	0.1712
0.150	0.1712
0.200	0.1712
0.250	0.1712
0.300	0.1712
0.327	0.1712
0.400	0.1400
0.500	0.1120
0.750	0.0747
1.000	0.0560
1.500	0.0373
2.000	0.0280
2.500	0.0224
3.000	0.0187
4.000	0.0140
5.000	0.0112
6.000	0.0093
7.500	0.0060
10.000	0.0034

3 Deaggregations of Seismic Hazard

The ASCE 7-10 guidelines require that the input acceleration time histories for site-specific ground response evaluations be developed from representative recorded or simulated earthquake motions. These records shall be selected from events having magnitudes and source-to-site distances that are consistent with those that control the MCE_R ground motion, and each selected time history shall be scaled so that its response spectrum matches, on average, the MCE_R rock response spectrum over the period range of significance. Factors that are often considered in input motion selection include (1) the moment magnitudes (**M**) and source-to-site distances (R) of earthquakes that dominate the seismic hazard at the site, (2) the average shear-wave velocity in the upper 30 m of the subsurface (V_{S30}) at the site, and (3) the geologic/tectonic conditions of the region.

Seismic hazard deaggregations, available through the USGS website, allow us to determine the magnitudes and source-to-site distances of the earthquakes that dominate the seismic hazard at the site. Input ground motions can then be selected to be as representative of these magnitudes and distances as possible, although some compromises are ultimately necessary due to the limited range of ground-motion recordings in the central and eastern United States. A deaggregation plot for a uniform hazard spectrum presents the relative contributions of earthquakes with different magnitudes and distances to the seismic hazard at a given location.

For the project site (Latitude: 42.4412°, Longitude: −71.4201°), seismic hazard deaggregations were performed using the USGS Unified Hazard Tool (https://earthquake.usgs.gov/hazards/interactive/index.php) using the "Dynamic: Conterminous U.S. 2008 (v3.3.3)" edition of the seismic hazard maps, to be consistent with the usage of ASCE 7-10. Assuming site conditions of 2000 m/s (Site Class A), computations are available on the website for spectral accelerations at the following seven spectral periods: 0 s (PGA), 0.1 s, 0.2 s, 0.3 s, 0.5 s, 1 s, and 2 s. A time horizon of 2,475 years has been used, because the MCE_R ground motion maps of ASCE 7-10 are derived from the 2008 USGS probabilistic ground motion maps for the 2% in 50 years hazard level (2,475-year return period). Figures 7 and 8 present the seismic hazard deaggregation plots for PGA and 2 s spectral acceleration, respectively; the full deaggregation reports for all spectral acceleration parameters are available in Appendix B of this report.

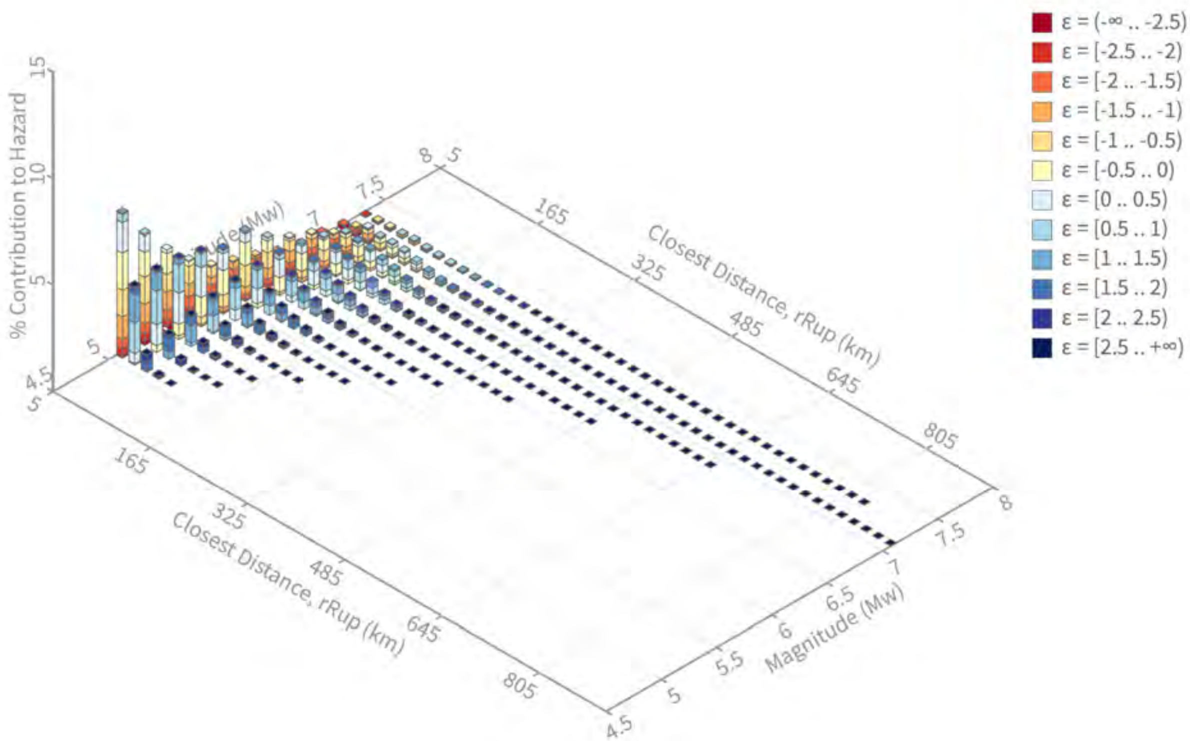


Figure 7. USGS seismic hazard deaggregation for PGA at a return period of 2,475 years for Site Class A at the project site.

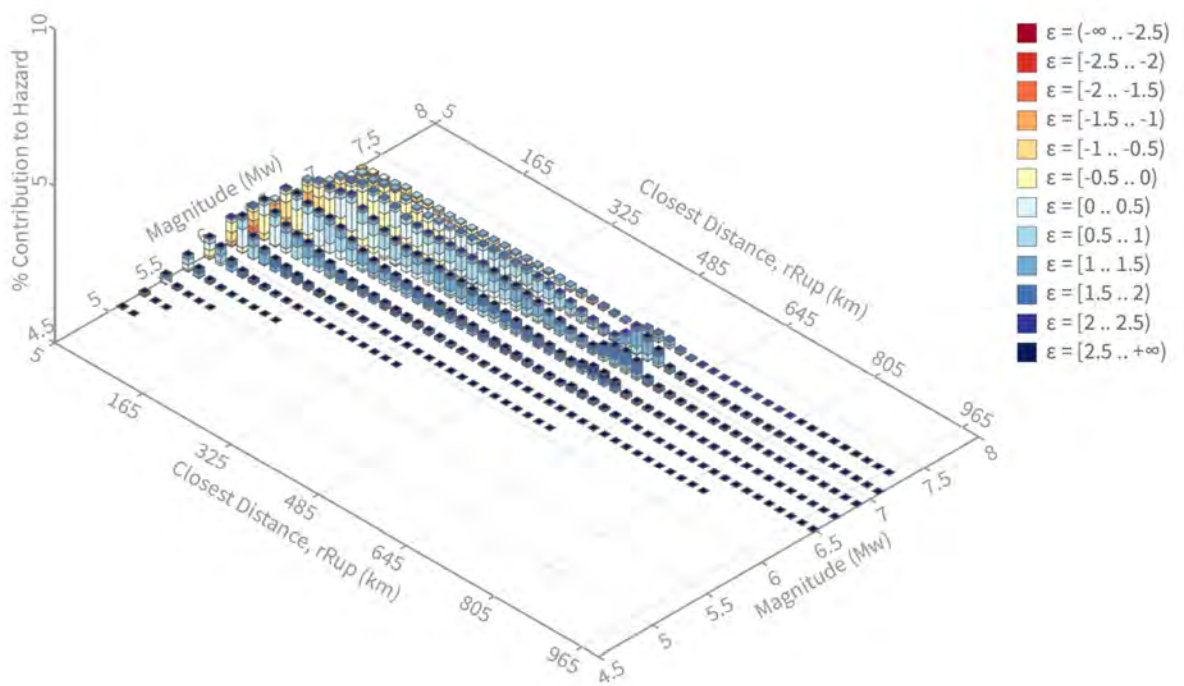


Figure 8. USGS seismic hazard deaggregation for 2 s spectral acceleration at a return period of 2,475 years for Site Class A at the project site.

Analysis of deaggregation plots allow for a determination of the earthquake magnitudes and distances that dominate the seismic hazard, so that appropriate input motions can be selected. The deaggregation plot for PGA (Figure 7) shows that the seismic hazard is dominated by small- to moderate-magnitude (5 to 7), low- to medium-distance (< 100 km) earthquakes. There is no significantly distinguishable contribution to the hazard coming from any particular seismic source; the hazard is dominated by diffuse background seismicity. For longer periods such as 2 s (Figure 8), the hazard is still dominated by low- to medium-distance earthquakes associated with background seismicity, but at slightly larger magnitudes (6 to 7) and longer distances (up to approximately 200 km). However, a noticeable secondary zone of influence at long periods occurs due to the distant earthquakes from the Charlevoix Seismic Zone in the Saint Lawrence Valley, Quebec, having dominant magnitudes of 6.8 to 7.5 and source-to-site distances of 500–600 km.

For the seven spectral accelerations available in the USGS seismic hazard deaggregation tool, Table 2 displays the magnitudes and source-to-site distances associated with the *mean* seismic hazard contribution (across all sources), as well as the *mode* (corresponding to the **M**-R bin with the greatest seismic hazard contribution). For longer spectral periods, the hazard is dominated by slightly larger-magnitude earthquakes at noticeably greater distances. However, significant contributions still occur at smaller magnitudes and distances. In order to encompass the sample space of potential earthquake magnitudes and distances that may affect the site, the bounds of **M** and R used in the input motion selection procedure will be kept as large as possible. Tarbali and Bradley (2016) showed that keeping this bound wide can help to select ground motions with a better representation of the target response spectrum. Stewart et al. (2014) and Haselton et al. (2017) emphasized that magnitude, distance, and site class effects are implicit in the spectral shape of the candidate ground motions, and therefore the shape of the response spectrum should be the primary consideration when selecting ground motions. Ultimately, the analysis of the seismic hazard deaggregations indicate that the seismic hazard at the project site is controlled by a range of magnitudes and distances, and therefore the selection of input motions will encompass a diverse range of **M**-R characteristics.

Table 2. Mean and modal magnitudes and distances from the USGS 2008 seismic hazard deaggregation for seven spectral accelerations at different spectral periods.

Spectral acceleration parameter	Mean		Mode	
	M	R (km)	**M**	R (km)
PGA (T = 0 s)	6.03	54.90	5.1	13.40
Sa(T = 0.1 s)	6.05	57.73	5.1	13.16
Sa(T = 0.2 s)	6.15	70.64	5.1	12.86
Sa(T = 0.3 s)	6.27	87.84	5.1	12.36
Sa(T = 0.5 s)	6.43	117.74	6.1	30.87
Sa(T = 1 s)	6.59	173.30	6.1	30.73
Sa(T = 2 s)	6.72	233.24	6.7	110.39

4 Selection and Scaling of Input Rock Motions

Database of ground motions and search criteria

An important step in the input motion selection process is to identify appropriate databases with representative ground motion recordings from the seismic sources that contribute to the hazard at a site. The NGA-East Database (Goulet et al., 2014), maintained by the Pacific Earthquake Engineering Research Center (PEER), was used to select and scale ground motions to the target spectrum. This database is freely available at https://ngawest2.berkeley.edu and has over 29,000 records from seismic conditions relevant to central and eastern North America. Over 81 earthquake events and 1379 recording stations are represented in the NGA-East database; the earthquakes have magnitudes greater than 2.5, and the source-to-site distances for the records are no greater than 1500 km. The NGA-East Database was selected because it contains ground motions from the tectonic environment in which the project site is located; therefore, the ground motions in the database are similar in character to those that may potentially be encountered at the project site.

The target spectrum developed in Chapter 2 was uploaded to the online PEER NGA-East database search tool, and the search parameters were specified as follows: $3 \leq \mathbf{M} \leq 8$, $R \leq 1{,}000$ km (both source-to-site distance metrics, R_{RUP} [rupture distance] and R_{JB} [Joyner-Boore distance]), and $360 \leq V_{S30} \leq 3000$ m/s. The magnitude and distance bounds reflect the wide range of contributing earthquakes from the seismic hazard deaggregation, and the V_{S30} bounds reflect the stiff underlying site conditions (Site Classes A, B, and C). These search bounds were selected to ensure the range is large enough range to encompass a suitable number of candidate ground motions, while ensuring that the magnitudes, distances, and site conditions are not unreasonable for representing the seismic hazard at the site. However, consistent with the recommendations of Stewart et al. (2014) and Haselton et al. (2017), greater emphasis was placed on adequately matching the target response spectrum than adhering to a rigid range of **M**, R, and V_{S30}.

Period range of interest for the containment wall

The input ground motions should be selected and scaled so that their match to the target response spectrum is optimized over the period range of interest to the structure. The National Earthquake Hazards Reduction Program [NEHRP] provisions (BSSC, 2015) recommend focusing on a period range of $0.2T$ to $2.0T$ for selecting input motions for structural analyses, where T is the elastic fundamental period of the structure. Stewart et al. (2014) recommends the same period range ($0.2T$ to $2.0T$) be used for selecting input motions for site response analyses, because this period range will be important for the overlying structure.

The natural period of vibration representing the fundamental mode of the containment wall was estimated by assuming the wall acts as a cantilever beam, fixed on the bottom and free on the top. This is a reasonable approximation for the natural period of vibration of a cantilever earth-retaining structure (particularly a wall embedded in bedrock at its base), and this method is especially appropriate given that an approximate range of values (not a single precise value) is needed for the matching period range. The theoretical equation for the natural frequency of a cantilever beam is available in a number of textbooks and resources on structural dynamics in different formats. Assuming the wall acts as a fixed-free cantilever beam with a uniform cross-section and material properties, and using the notation of Bakr et al. (2019), the natural frequency f_0 of a cantilever retaining wall may be written as

$$f_0 = \frac{(1.875)^2}{2\pi}\sqrt{\frac{EI}{\rho A H^4}}\,,$$

where E = modulus of elasticity of the material comprising the wall, I = moment of inertia of the wall cross-section, ρ = density of the material comprising the wall, A = area of the wall cross-section, and H = height of the wall. The geometry can be specified for a unit length in and out of the page and written in terms of the wall thickness, t. The moment of inertia of the cross-section may be expressed as $I = \frac{1}{12}(1)(t^3)$, with bending occurring about the thickness of the wall, and the area of the cross-section may be expressed as $A = (1)(t)$. Furthermore, in place of density ρ, this equation may be written in terms of the unit weight of the wall material, γ, and gravitational acceleration, g, where $\rho = \gamma/g$. Inserting these expressions for E, A, and ρ into the previous equation and simplifying, we have:

$$f_0 = \frac{(1.875)^2}{2\pi}\sqrt{\frac{EI}{\rho A H^4}} = \frac{(1.875)^2}{2\pi}\sqrt{\frac{E\left[\frac{1}{12}(1)(t^3)\right]}{\left(\frac{\gamma}{g}\right)[(1)(t)]H^4}} = \frac{(1.875)^2}{2\pi}\sqrt{\frac{Et^2 g}{12\gamma H^4}}\,.$$

Taking the inverse of the fundamental frequency equation, the fundamental period of vibration can then be computed as:

$$T_0 = \frac{1}{f_0} = \boxed{\frac{2\pi}{(1.875)^2}\sqrt{\frac{12\gamma H^4}{Et^2 g}}}\,.$$

The necessary input properties concerning the material of the wall – reinforced concrete – are the unit weight γ, assumed to take a standard value of 150 lb/ft^3, and the modulus of elasticity E. Per the American Concrete Institute (ACI) 318 building code requirements (ACI, 2019), the modulus of elasticity of normal-weight reinforced concrete may be determined from the equation $E = 57{,}000\sqrt{f_c'}$ [psi], where f_c' is the 28-day compressive strength of the concrete. Assuming a range of 4000 to 5000 psi for f_c', a reasonable range of E therefore spans from 3,600,000 to 4,000,000 psi. For the geometric properties of the wall, a wall thickness t of 3–4 ft was assumed per Jean Louis Locsin's email of 1 November 2021. A total wall height H of approximately 75 to 100 ft was determined from analyzing the cross-sections of the containment wall alternatives dated 27 July 2021.

Three estimates of the fundamental period T_0 were computed: (1) a low estimate, using values of the input parameters that tend to decrease T_0; (2) a median estimate, using median or best-estimate values of the input parameters; and (3) a high estimate, using values of the input parameters that tend to increase T_0.

For the **low estimate** of T_0, the minimum height H of 75 ft was used, and the maximum values of E (4,000,000 psi) and t (4 ft) were used because E and t appear in the denominator of the equation for T_0. Inserting these values, a low estimate of T_0 is:

$$T_{0,low} = \frac{2\pi}{(1.875)^2}\sqrt{\frac{12\gamma H^4}{Et^2 g}} = \frac{2\pi}{(1.875)^2}\sqrt{\frac{12\left(150\,\frac{lb}{ft^3}\right)(75\,ft)^4}{\left(4{,}000{,}000\,\frac{lb}{in^2}\right)\left[(4\,ft)\left(\frac{12\,in}{1\,ft}\right)\right]^2\left(32.2\,\frac{ft}{s^2}\right)}} = \mathbf{0.783\ s}$$

For the **median estimate** of T_0, values of the input parameters in the middle of their respective ranges were employed (H = 87.5 ft, E = 3,800,000 psi, t = 3.5 ft). Inserting these values, a median estimate of T_0 is:

$$T_{0,med} = \frac{2\pi}{(1.875)^2}\sqrt{\frac{12\gamma H^4}{Et^2 g}} = \frac{2\pi}{(1.875)^2}\sqrt{\frac{12\left(150\,\frac{lb}{ft^3}\right)(87.5\,ft)^4}{\left(3{,}800{,}000\,\frac{lb}{in^2}\right)\left[(3.5\,ft)\left(\frac{12\,in}{1\,ft}\right)\right]^2\left(32.2\,\frac{ft}{s^2}\right)}} = \mathbf{1.25\ s}$$

Finally, for the **high estimate** of T_0, the maximum height H of 100 ft was used, and the minimum values of E (3,600,000 psi) and t (3 ft) were used because E and t appear in the denominator of the equation for T_0. Inserting these values, a high estimate of T_0 is:

$$T_{0,high} = \frac{2\pi}{(1.875)^2}\sqrt{\frac{12\gamma H^4}{Et^2 g}} = \frac{2\pi}{(1.875)^2}\sqrt{\frac{12\left(150\,\frac{lb}{ft^3}\right)(100\,ft)^4}{\left(3{,}600{,}000\,\frac{lb}{in^2}\right)\left[(3\,ft)\left(\frac{12\,in}{1\,ft}\right)\right]^2\left(32.2\,\frac{ft}{s^2}\right)}} = \mathbf{1.96\ s}$$

The median estimate of the natural period of vibration of the wall is 1.25 s, with a low estimate of 0.78 s and a high estimate of 1.96 s. To keep the period range as wide as possible to encompass these alternatives, while considering the criteria of Stewart et al. (2014), the input motions were selected to match the target spectrum over a period range of **0.2 s to 3.0 sec**. As will be discussed in in the following subsection, spectral periods of 0.04 to 5 sec were ultimately used in the goodness-of-fit calculations, but the heaviest weights were applied in the 0.2 to 3.0 sec range.

Selection and scaling of candidate ground motion records

There are generally two approaches for modifying the time series to be consistent with the target response spectrum: scaling and spectral matching. *Scaling* involves the multiplication of the initial time series by a constant factor, so that the response spectrum of the scaled time series approaches the target response spectrum over the desired period range; and *spectral matching* involves modifying the frequency content of the time series to match the target response spectrum at all periods (Al Atik and Abrahamson, 2010). However, the smooth spectrum derived from spectral matching is not representative of a real ground motion, and therefore spectral matching is not recommended as part of hazard-consistent site response analysis preferred practices (Stewart et al., 2014). Therefore, the scaling method has been used to modify the recorded ground motions to be consistent with the target response spectrum. To ensure the greatest possible match between the recorded ground motions and the target response spectrum, maximum scale factors of up to 15 have been allowed.

Figure 9 displays a screenshot of the PEER NGA-East database with the search criteria employed in this study; a usable period range of 0.02 to 5 sec was selected. To incorporate as many earthquake magnitudes and distances as possible, and to maximize the potential number of records to accurately fit the shape of the target spectrum, the search included records from all portions of central and eastern North America, including both tectonic and potentially induced earthquakes. Because individual acceleration time series are desired, individual components (H1 or H2) were selected as the desired spectral ordinates. Response spectra were computed for a damping ratio of 5%, and the arithmetic suite average method was found to produce the best matches between the target spectrum and the individual response spectra of the input motions. The records were scaled to minimize the computed mean square error (MSE) of each record, as well as the suite average, with respect to the specified target spectrum.

A weighting function was employed such that spectral periods between 0.04 and 5 sec were considered in the MSE calculation. To emphasize the period range of interest to the proposed containment wall (0.2 to 3.0 s), the goodness-of-fit within this range was weighted three times as heavily as the goodness-of-fit at the endpoints of the full range (Figure 9).

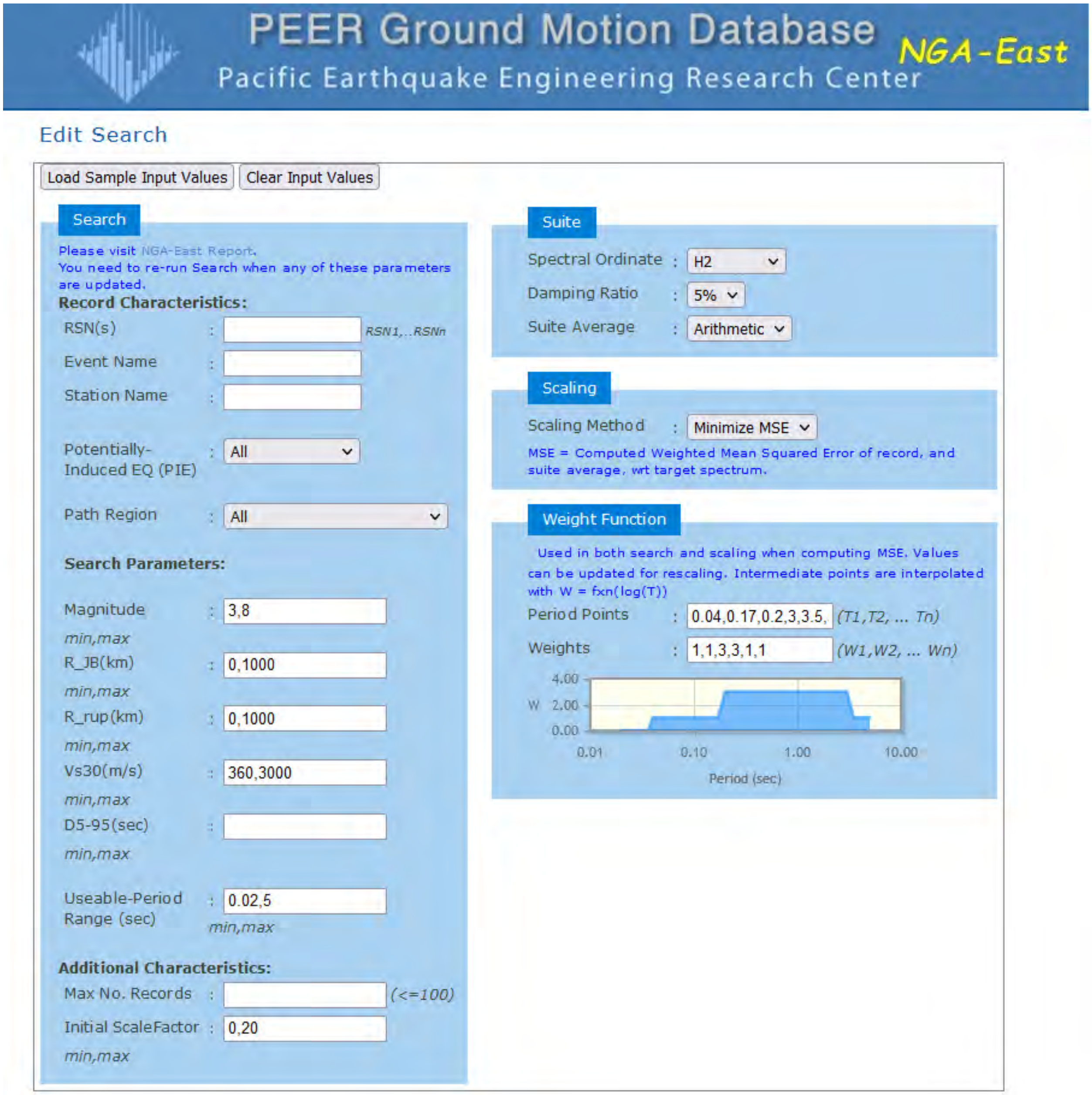


Figure 9. Screenshot of the PEER NGA-East database with the search criteria employed in this study.

After executing the search criteria, twenty (20) candidate ground-motion records were returned, as illustrated in Figure 10 from the PEER NGA-East database query. The suite of H2 components was found to provide a better overall match than the suite of H1 components. Many records appeared to adequately match the target spectrum over the period range of interest (0.2 to 3.0 s). The records were sorted in order of smallest MSE (representing the strongest match between the response spectra of the input motion and the target), and each record was individually inspected for potential inclusion in the final ground-motion suite. Eleven (11) records were ultimately selected to form the final suite of input rock motions. These records tended to provide the strongest fit to the target response spectrum (quantitatively and qualitatively), and consideration was given to select records from as many distinct earthquake events as possible. Records with the most reasonable ground-motion characteristics (in terms of amplitude, frequency, and duration) were prioritized.

Selected suite of input (rock) ground motions

Characteristics of the suite of selected input rock motions are shown in Table 3, and plots of the response spectra (in comparison to the target response spectrum) are given in Figures 11 and 12, plotted using logarithmic and linear scales, respectively. Numerical values of the scaled response spectra for each input motion, along with the median spectral acceleration of the suite, are provided in Table 4. The median is computed as the geometric mean of the natural logarithms of the individual response spectra (which are assumed to be lognormally distributed). The records in the suite are from the 2011 **M** 5.74 Mineral, Virginia, earthquake (4 records); 2011 **M** 5.68 Sparks, Oklahoma, earthquake (4 records); 2010 **M** 5.1 Val-des-Bois, Quebec, earthquake (1 record); 2002 **M** 4.99 Au Sable Forks, New York, earthquake (1 record); and the 1988 **M** 5.85 Saguenay, Quebec, earthquake (1 record).

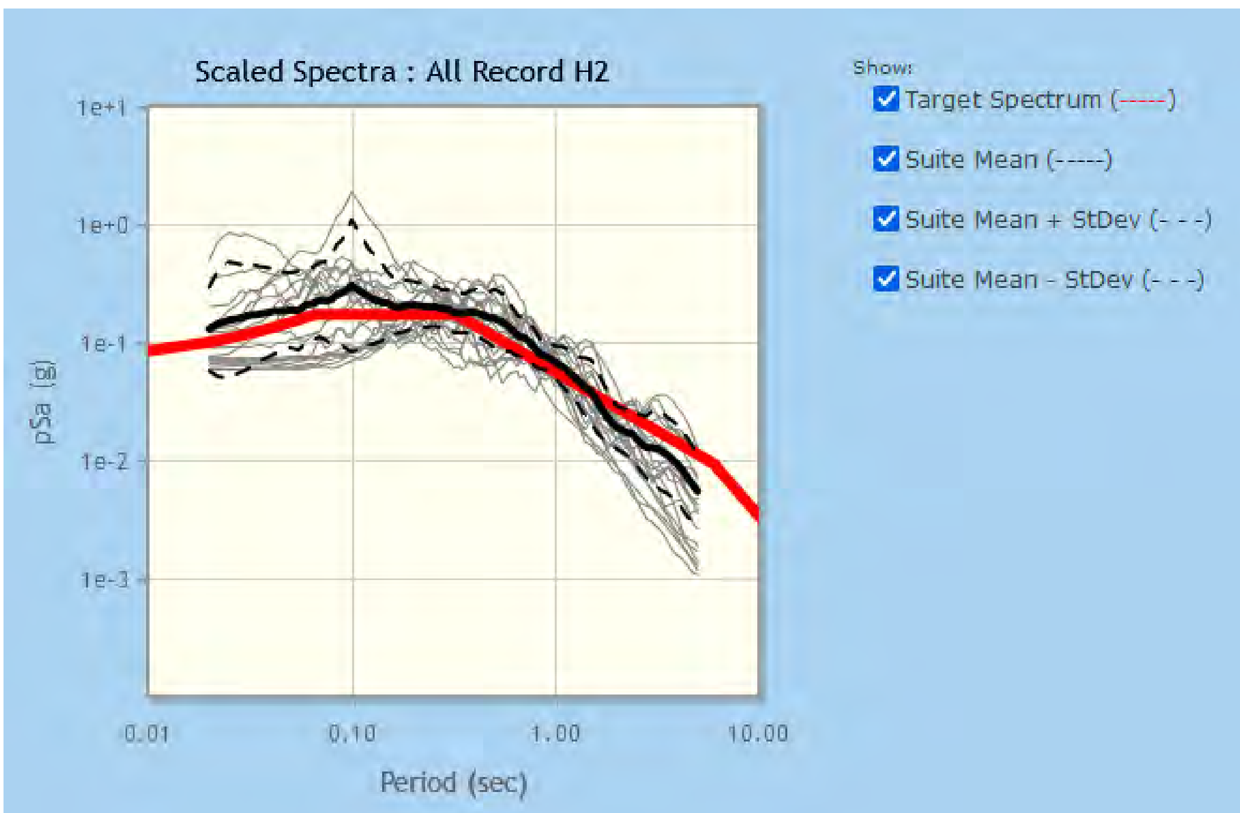


Figure 10. Scaled response spectra for the 20 candidate motions returned from the PEER NGA-East database query to match the target MCE_R bedrock response spectrum. Eleven records were selected from the set of candidate ground motions.

Table 3. Suite of eleven input (rock) motions matching the target MCE_R bedrock response spectrum (Site Class A)

Earthquake name and date	Station name	Record filename	NGA-East record seq. no. (RSN)	Scale factor	Time step, dt (s)	Moment Magnitude, **M**	Source-to-site distance, R_{rup} (km)	Avg. S-wave vel., V_{S30} (m/s)	Scaled Sa(T = 0.01 s) (*g*)
Saguenay, QC 1988-11-25	US.ISFL	RSN66_Saguenay88-11-25_US.ISFL.HHE.AT2	66	13.149	0.005	5.85	320.51	867	0.0729
Au Sable Forks, NY 2002-04-20	Belchertown	RSN596_AuSableForks02-04-20_NE.QUA2.HHE.AT2	596	15.411	0.01	4.99	269.92	541	0.1096
Val-des-Bois, QC 2010-06-23	Pickering_ ON	RSN4041_Val-des-Bois10-06-23_CN.PKRO.HHE.AT2	4041	13.791	0.01	5.10	354.3	403	0.1231
Mineral, VA 2011-08-23	Fordham University_ the Bronx_ NYC	RSN8409_Mineral11-08-23_LD.FOR.HHE.AT2	8409	13.558	0.01	5.74	475.96	518	0.0629
Mineral, VA 2011-08-23	Temple University_ PA	RSN8431_Mineral11-08-23_LD.TUPA.HHE.AT2	8431	8.995	0.01	5.74	343.11	566	0.0909
Mineral, VA 2011-08-23	St. Catherines_ ON	RSN8562_Mineral11-08-23_PO.STCO.HHE.AT2	8562	14.542	0.01	5.74	593.45	415	0.0716
Mineral, VA 2011-08-23	Tyneside_ ON	RSN8564_Mineral11-08-23_PO.TYNO.HHE.AT2	8564	13.736	0.01	5.74	594.11	404	0.0604
Sparks, OK 2011-11-06	Smith Ranch_ Marlow_ OK	RSN9568_SparksOK11-11-05_OK.X34A.HHN.AT2	9568	13.248	0.01	4.73	148.55	548	0.0678
Sparks, OK 2011-11-06	Jones High School	RSN10054_SparksOK11-11-06_GS.OK001.HNE.01.AT2	10054	4.082	0.005	5.68	48.04	615	0.1037
Sparks, OK 2011-11-06	Luther Middle School	RSN10056_SparksOK11-11-06_GS.OK005.HNE.01.AT2	10056	4.871	0.005	5.68	40.62	591	0.1076
Sparks, OK 2011-11-06	GS.OK010	RSN10058_SparksOK11-11-06_GS.OK010.HNE.01.AT2	10058	3.843	0.005	5.68	42.78	606	0.1226

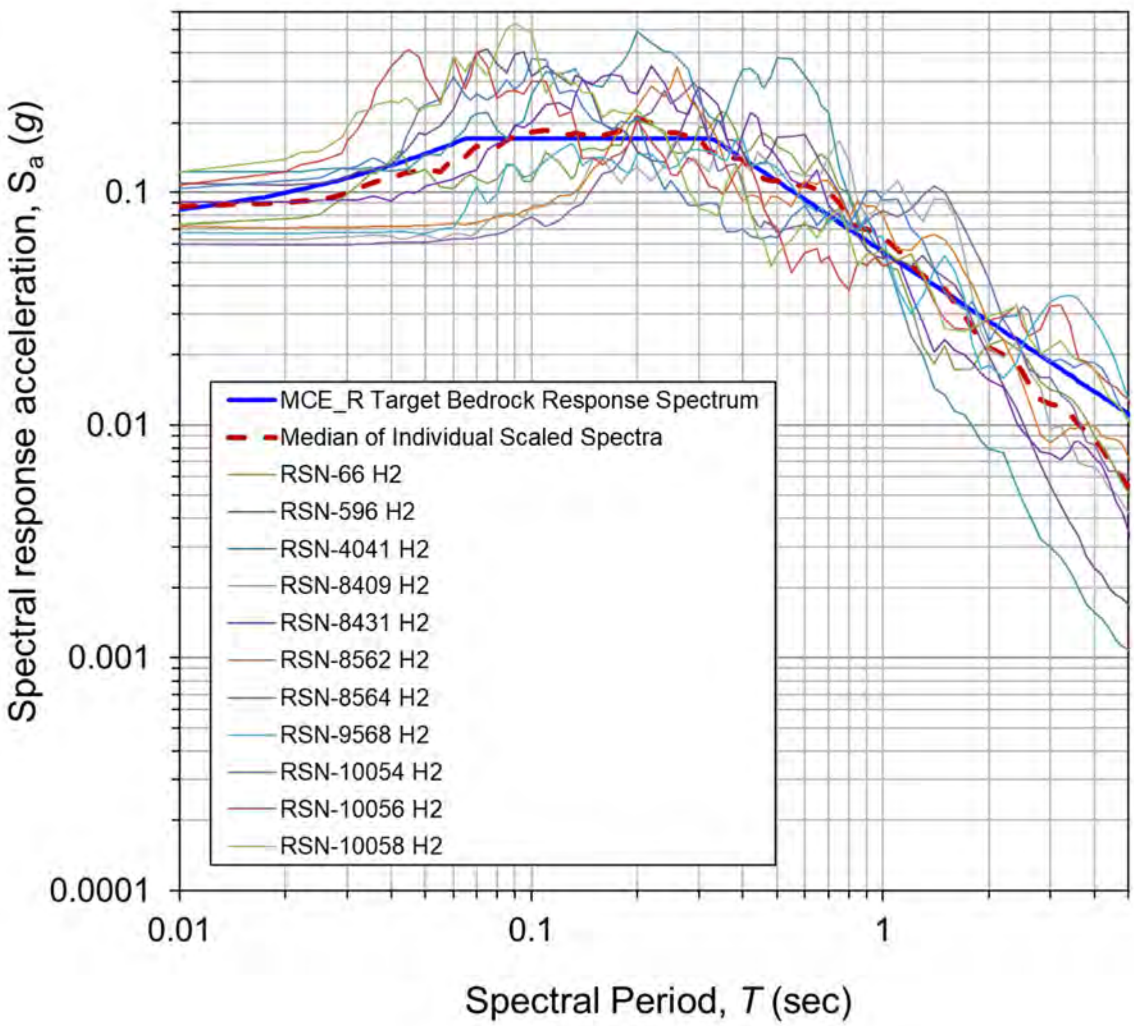


Figure 11. Scaled response spectra for the eleven input (rock) motions in comparison to the target MCE_R bedrock response spectrum (Site Class A), plotted using logarithmic-scale axes.

As observed in Figures 11 and 12, the ensemble of records produces a reasonable match to the target spectrum, especially within the period range of interest of 0.2 to 3.0 s. The fit at shorter periods (T < 0.2 s) is also adequate, although records at longer periods (T > 3 s) tend to have smaller long-period spectral accelerations compared to the target. The drop-off in the response spectra at long periods commonly occurs for ground motions in the central and eastern United States; however, these long periods are not likely to influence the proposed structure to a significant degree.

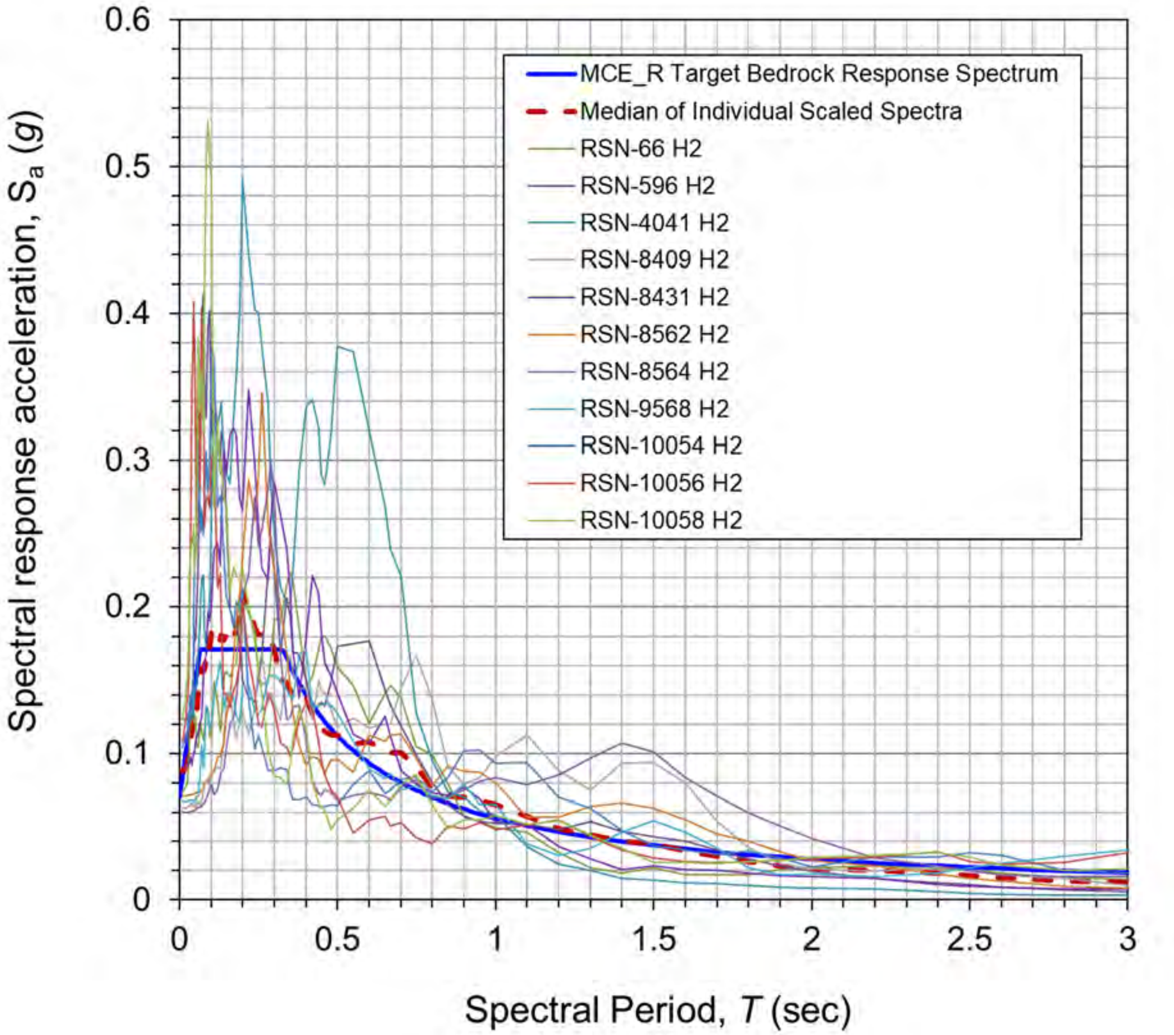


Figure 12. Scaled response spectra for the eleven input (rock) motions in comparison to the target MCE_R bedrock response spectrum (Site Class A), plotted using linear-scale axes.

Table 4. Scaled response spectra for input (rock) motions in the selected suite

Spectral Period, T (s)	Median Spectral Accel-eration, S_a (g)	Spectral Acceleration, S_a (g), of response spectra for each scaled input motion										
		RSN-66 H2	RSN-596 H2	RSN-4041 H2	RSN-8409 H2	RSN-8431 H2	RSN-8562 H2	RSN-8564 H2	RSN-9568 H2	RSN-10054 H2	RSN-10056 H2	RSN-10058 H2
0.01	0.0873	0.0729	0.1096	0.1231	0.0629	0.0909	0.0716	0.0604	0.0678	0.1037	0.1076	0.1226
0.02	0.0900	0.0771	0.1072	0.1225	0.0628	0.0907	0.0709	0.0597	0.0672	0.1129	0.1223	0.1385
0.03	0.1002	0.0986	0.1167	0.1265	0.0646	0.0927	0.0711	0.0600	0.0678	0.1273	0.1670	0.1900
0.04	0.1148	0.1383	0.1325	0.1243	0.0653	0.0916	0.0717	0.0611	0.0681	0.1286	0.3510	0.2483
0.05	0.1255	0.1257	0.1775	0.1468	0.0657	0.1068	0.0724	0.0614	0.0669	0.2403	0.3167	0.2346
0.06	0.1416	0.1038	0.2286	0.1680	0.0667	0.1140	0.0735	0.0633	0.0713	0.3139	0.3779	0.3836
0.075	0.1571	0.1093	0.4142	0.2218	0.0749	0.1528	0.0763	0.0658	0.0894	0.2493	0.3509	0.3188
0.1	0.1822	0.1115	0.3164	0.2667	0.0880	0.2013	0.0853	0.0784	0.1191	0.3745	0.3018	0.4887
0.15	0.1812	0.1560	0.2586	0.2910	0.1383	0.2922	0.1261	0.1046	0.1410	0.2059	0.1410	0.2695
0.2	0.2103	0.2055	0.1502	0.4922	0.1282	0.2658	0.2323	0.2067	0.1459	0.2119	0.2049	0.2262
0.25	0.1813	0.1530	0.1495	0.4008	0.1588	0.2563	0.2882	0.2415	0.1272	0.1125	0.1196	0.1562
0.3	0.1714	0.1917	0.2238	0.2497	0.1340	0.2848	0.2250	0.2764	0.1534	0.0879	0.1294	0.0845
0.4	0.1386	0.1473	0.1501	0.3365	0.1441	0.1795	0.0921	0.1089	0.1715	0.0699	0.1357	0.1153
0.5	0.1122	0.1591	0.1731	0.3775	0.1178	0.1419	0.0962	0.0675	0.1277	0.0643	0.0705	0.0546
0.6	0.1078	0.1201	0.1771	0.3202	0.1173	0.1068	0.1122	0.0732	0.0893	0.0881	0.0550	0.0750
0.75	0.0905	0.1045	0.0991	0.1276	0.1673	0.0792	0.0969	0.0819	0.0782	0.0839	0.0429	0.0853
1	0.0649	0.0492	0.0522	0.0577	0.0977	0.0532	0.0795	0.0835	0.0649	0.0928	0.0482	0.0577
1.5	0.0384	0.0219	0.0433	0.0135	0.0937	0.0233	0.0629	0.1007	0.0540	0.0374	0.0285	0.0258
2	0.0215	0.0222	0.0198	0.0079	0.0214	0.0157	0.0269	0.0421	0.0180	0.0230	0.0283	0.0295
2.5	0.0169	0.0202	0.0103	0.0047	0.0197	0.0094	0.0151	0.0204	0.0221	0.0326	0.0266	0.0295
3	0.0124	0.0143	0.0055	0.0030	0.0097	0.0076	0.0084	0.0161	0.0341	0.0187	0.0327	0.0215
4	0.0087	0.0090	0.0024	0.0016	0.0067	0.0073	0.0100	0.0083	0.0281	0.0186	0.0172	0.0172
5	0.0054	0.0052	0.0017	0.0011	0.0042	0.0036	0.0073	0.0061	0.0130	0.0108	0.0130	0.0105

The ground-motion files downloaded through the PEER NGA-East database are unscaled, processed, as-recorded (unrotated) displacement, velocity, and acceleration trace files. Using the statistical language and environment R (R Core Team, 2021), the acceleration time histories were multiplied by the scale factors in Table 3 and converted into the proper format for DEEPSOIL (one column for time [s], and a second column for acceleration [g]). These ground-motion files, provided with this report, are ready for usage in subsequent site-specific analyses as input (rock) motions in DEEPSOIL. A spreadsheet containing the target MCE_R bedrock response spectrum and the scaled response spectra of the individual acceleration time series has also been provided.

5 Summary and Limitations

This report has been prepared for the exclusive use of Haley & Aldrich, Inc., and their representatives as part of the Nuclear Metals, Inc. Superfund site in Concord, Massachusetts. The analyses in this report were performed in accordance with generally accepted practices in the field, and the conclusions and recommendations in this report are based on the professional judgment and experience of Kaklamanos Consulting, LLC. No warranty or other conditions, express or implied, should be understood.

With the input bedrock motion selection complete, I look forward to assisting with the review of site-specific ground response analyses. Please let me know if you have any questions on this report, and/or if you would like to arrange a meeting to discuss any aspects of this study. I can be reached at (603) 801-2211 or Jim.Kaklamanos@gmail.com. Thank you for the opportunity to partake in this project.

Sincerely,

Kaklamanos Consulting, LLC

By: James Kaklamanos

James Kaklamanos, Ph.D.
Its Manager
Duly Authorized

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APPENDICES

APPENDIX A

USGS Seismic Design Calculator: Mapped Spectral Response Acceleration Parameters (ASCE 7-10)

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APPENDIX B

USGS Seismic Hazard Deaggregations for 2,475-year Return Period, Site Class A

1. USGS Seismic Hazard Deaggregation for Peak Ground Acceleration
2. USGS Seismic Hazard Deaggregation for Spectral Acceleration at 0.1 sec
3. USGS Seismic Hazard Deaggregation for Spectral Acceleration at 0.2 sec
4. USGS Seismic Hazard Deaggregation for Spectral Acceleration at 0.3 sec
5. USGS Seismic Hazard Deaggregation for Spectral Acceleration at 0.5 sec
6. USGS Seismic Hazard Deaggregation for Spectral Acceleration at 1 sec
7. USGS Seismic Hazard Deaggregation for Spectral Acceleration at 2 sec

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

Input

Edition

Dynamic: Conterminous U.S. 2008 (v...

Latitude

Decimal degrees

42.4412

Longitude

Decimal degrees, negative values for western longitudes

-71.4201

Site Class

2000 m/s (Site class A)

Spectral Period

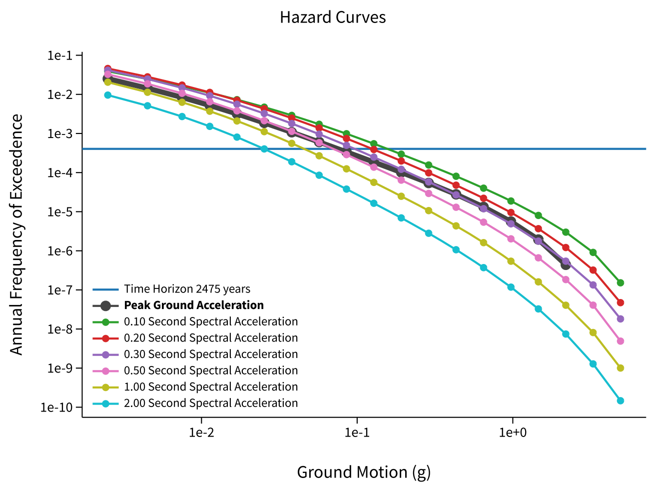
Peak Ground Acceleration

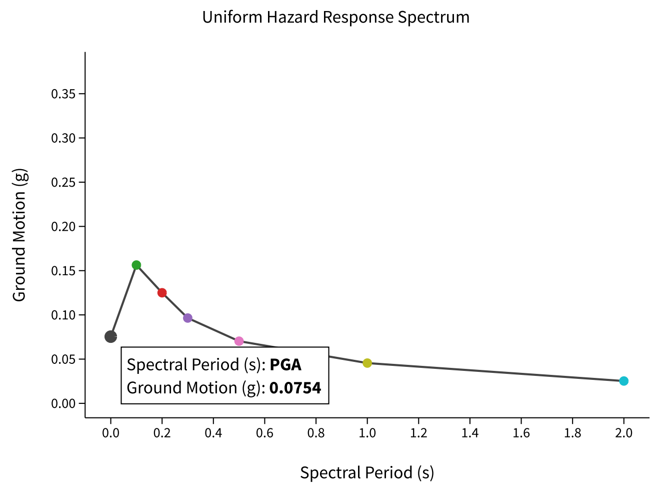
Time Horizon

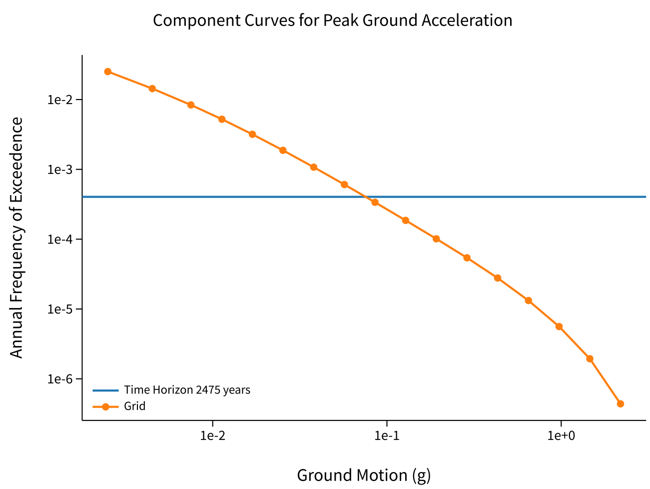
Return period in years

2475

Hazard Curve





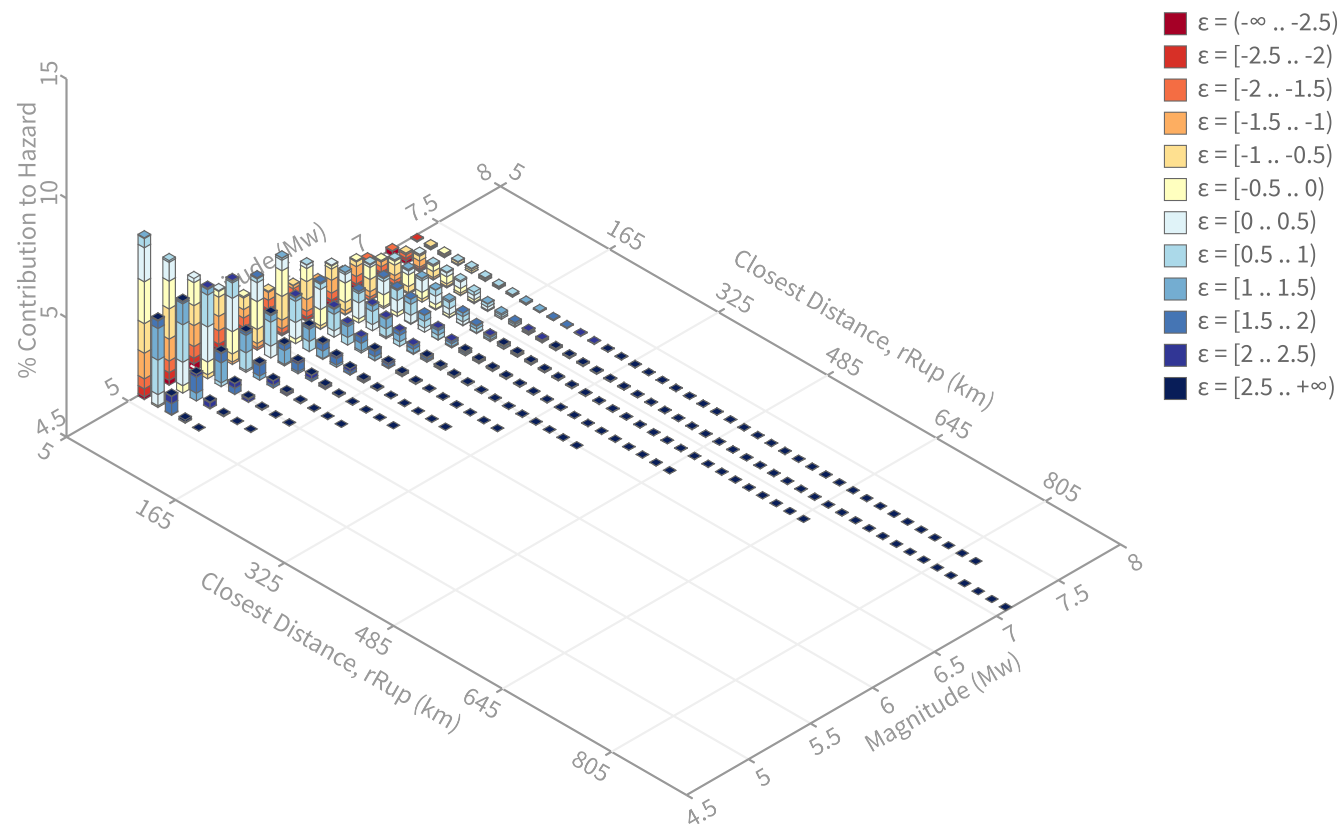


View Raw Data

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
PGA ground motion: 0.075406283 g

Recovered targets

Return period: 2471.6804 yrs
Exceedance rate: 0.00040458306 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.81 %

Mean (over all sources)

m: 6.03
r: 54.9 km
ε_0: -0.03 σ

Mode (largest m-r bin)

m: 5.1
r: 13.4 km
ε_0: -0.55 σ
Contribution: 6.77 %

Mode (largest m-r-ε_0 bin)

m: 5.09
r: 15.98 km
ε_0: -0.24 σ
Contribution: 1.75 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
CEUS.2007all8.J.in (opt)	Grid							55.79
PointSourceFinite: -71.420, 42.599		17.55	5.55	-0.86	71.420°W	42.599°N	0.00	6.42
PointSourceFinite: -71.420, 42.689		26.72	5.70	-0.30	71.420°W	42.689°N	0.00	4.37
PointSourceFinite: -71.420, 42.733		31.28	5.78	-0.12	71.420°W	42.733°N	0.00	3.64
PointSourceFinite: -71.420, 42.778		35.81	5.86	0.01	71.420°W	42.778°N	0.00	3.35
PointSourceFinite: -71.420, 42.644		22.14	5.62	-0.53	71.420°W	42.644°N	0.00	3.04
PointSourceFinite: -71.420, 42.509		8.77	5.46	-1.90	71.420°W	42.509°N	0.00	3.04
PointSourceFinite: -71.420, 42.823		40.32	5.94	0.12	71.420°W	42.823°N	0.00	3.00
PointSourceFinite: -71.420, 42.913		49.33	6.09	0.28	71.420°W	42.913°N	0.00	2.85
PointSourceFinite: -71.420, 42.554		13.03	5.49	-1.31	71.420°W	42.554°N	0.00	2.02
PointSourceFinite: -71.420, 43.003		58.37	6.21	0.42	71.420°W	43.003°N	0.00	1.93
PointSourceFinite: -71.420, 42.958		53.84	6.15	0.35	71.420°W	42.958°N	0.00	1.60
PointSourceFinite: -71.420, 42.868		44.82	6.01	0.20	71.420°W	42.868°N	0.00	1.54
PointSourceFinite: -71.420, 43.093		67.61	6.31	0.56	71.420°W	43.093°N	0.00	1.32
PointSourceFinite: -71.420, 43.048		62.96	6.27	0.48	71.420°W	43.048°N	0.00	1.23
PointSourceFinite: -71.420, 43.183		77.05	6.38	0.67	71.420°W	43.183°N	0.00	1.21
PointSourceFinite: -71.420, 43.138		72.33	6.34	0.63	71.420°W	43.138°N	0.00	1.09
PointSourceFinite: -71.420, 43.318		91.29	6.46	0.74	71.420°W	43.318°N	0.00	1.04
PointSourceFinite: -71.420, 42.464		5.54	5.44	-2.42	71.420°W	42.464°N	0.00	1.00
CEUS.2007all8.AB.in (opt)	Grid							44.21
PointSourceFinite: -71.420, 42.599		17.42	5.59	-0.66	71.420°W	42.599°N	0.00	5.67
PointSourceFinite: -71.420, 42.689		26.36	5.77	-0.16	71.420°W	42.689°N	0.00	3.58
PointSourceFinite: -71.420, 42.509		8.75	5.47	-1.66	71.420°W	42.509°N	0.00	2.97
PointSourceFinite: -71.420, 42.733		30.78	5.86	-0.01	71.420°W	42.733°N	0.00	2.90
PointSourceFinite: -71.420, 42.778		35.17	5.95	0.09	71.420°W	42.778°N	0.00	2.63
PointSourceFinite: -71.420, 42.644		21.90	5.67	-0.37	71.420°W	42.644°N	0.00	2.57
PointSourceFinite: -71.420, 42.823		39.54	6.04	0.18	71.420°W	42.823°N	0.00	2.33
PointSourceFinite: -71.420, 42.913		48.29	6.21	0.31	71.420°W	42.913°N	0.00	2.19
PointSourceFinite: -71.420, 42.554		12.97	5.52	-1.09	71.420°W	42.554°N	0.00	1.89
PointSourceFinite: -71.420, 43.003		57.09	6.35	0.42	71.420°W	43.003°N	0.00	1.48
PointSourceFinite: -71.420, 42.958		52.68	6.28	0.36	71.420°W	42.958°N	0.00	1.23
PointSourceFinite: -71.420, 42.868		43.91	6.13	0.25	71.420°W	42.868°N	0.00	1.19
PointSourceFinite: -71.420, 43.093		66.07	6.46	0.53	71.420°W	43.093°N	0.00	1.01

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

Input

Edition

Dynamic: Conterminous U.S. 2008 (v…

Latitude

Decimal degrees

42.4412

Longitude

Decimal degrees, negative values for western longitudes

-71.4201

Site Class

2000 m/s (Site class A)

Spectral Period

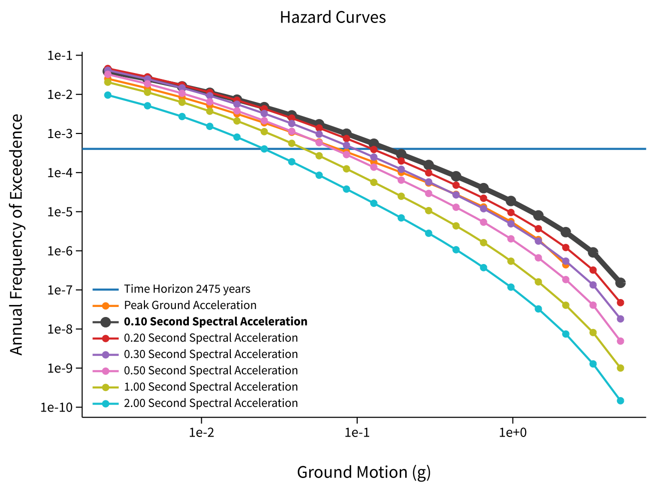
0.10 Second Spectral Acceleration

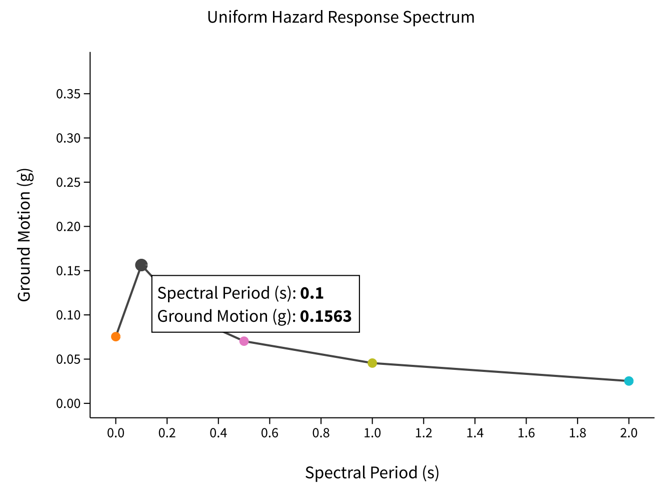
Time Horizon

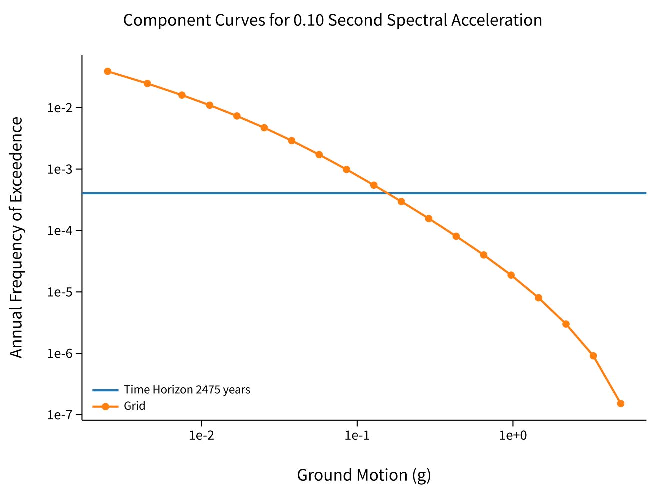
Return period in years

2475

Hazard Curve





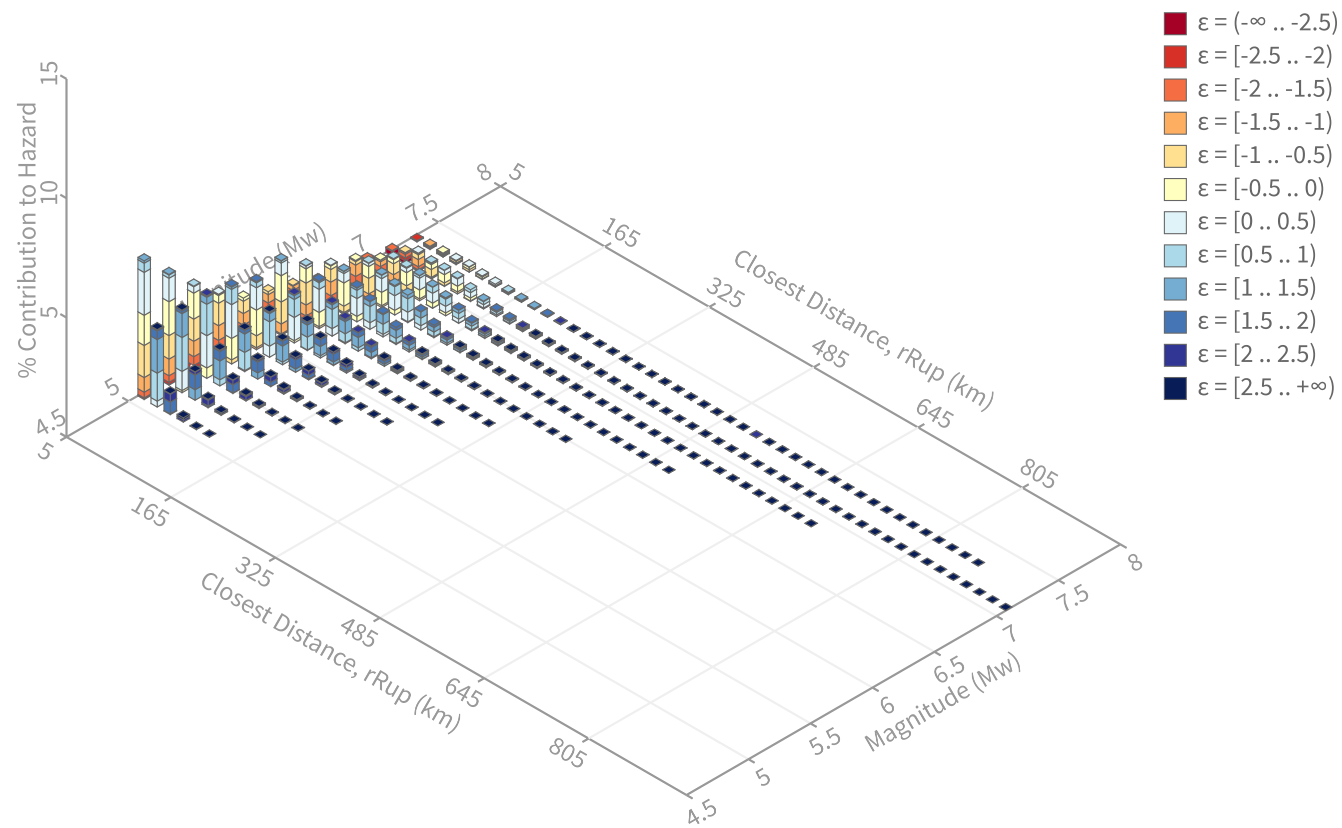


[View Raw Data]

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
0.1 s SA ground motion: 0.15634189 g

Recovered targets

Return period: 2467.5142 yrs
Exceedance rate: 0.00040526616 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.79 %

Mean (over all sources)

m: 6.05
r: 57.73 km
ε_0: 0.13 σ

Mode (largest m-r bin)

m: 5.1
r: 13.16 km
ε_0: -0.28 σ
Contribution: 5.8 %

Mode (largest m-r-ε_0 bin)

m: 5.09
r: 17.64 km
ε_0: 0.27 σ
Contribution: 1.8 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε0	lon	lat	az	%
CEUS.2007all8.J.in (opt)	Grid							56.06
PointSourceFinite: -71.420, 42.599		17.48	5.58	-0.65	71.420°W	42.599°N	0.00	5.76
PointSourceFinite: -71.420, 42.689		26.63	5.72	-0.18	71.420°W	42.689°N	0.00	4.02
PointSourceFinite: -71.420, 42.733		31.20	5.79	-0.03	71.420°W	42.733°N	0.00	3.42
PointSourceFinite: -71.420, 42.778		35.76	5.87	0.09	71.420°W	42.778°N	0.00	3.22
PointSourceFinite: -71.420, 42.823		40.31	5.94	0.19	71.420°W	42.823°N	0.00	2.97
PointSourceFinite: -71.420, 42.913		49.41	6.07	0.34	71.420°W	42.913°N	0.00	2.94
PointSourceFinite: -71.420, 42.509		8.76	5.47	-1.51	71.420°W	42.509°N	0.00	2.89
PointSourceFinite: -71.420, 42.644		22.05	5.64	-0.38	71.420°W	42.644°N	0.00	2.75
PointSourceFinite: -71.420, 43.003		58.54	6.19	0.47	71.420°W	43.003°N	0.00	2.06
PointSourceFinite: -71.420, 42.554		12.99	5.51	-1.03	71.420°W	42.554°N	0.00	1.85
PointSourceFinite: -71.420, 42.958		53.97	6.13	0.41	71.420°W	42.958°N	0.00	1.68
PointSourceFinite: -71.420, 42.868		44.86	6.01	0.27	71.420°W	42.868°N	0.00	1.56
PointSourceFinite: -71.420, 43.093		67.84	6.28	0.59	71.420°W	43.093°N	0.00	1.46
PointSourceFinite: -71.420, 43.183		77.33	6.34	0.70	71.420°W	43.183°N	0.00	1.36
PointSourceFinite: -71.420, 43.048		63.16	6.24	0.53	71.420°W	43.048°N	0.00	1.34
PointSourceFinite: -71.420, 43.138		72.58	6.31	0.66	71.420°W	43.138°N	0.00	1.22
PointSourceFinite: -71.420, 43.318		91.64	6.42	0.77	71.420°W	43.318°N	0.00	1.18
PointSourceFinite: -71.420, 43.228		82.08	6.37	0.72	71.420°W	43.228°N	0.00	1.08
PointSourceFinite: -71.420, 43.498		110.92	6.49	0.84	71.420°W	43.498°N	0.00	1.02
PointSourceFinite: -71.420, 43.408		101.26	6.46	0.81	71.420°W	43.408°N	0.00	1.02
CEUS.2007all8.AB.in (opt)	Grid							43.94
PointSourceFinite: -71.420, 42.599		17.33	5.62	-0.49	71.420°W	42.599°N	0.00	5.00
PointSourceFinite: -71.420, 42.689		26.26	5.79	-0.07	71.420°W	42.689°N	0.00	3.28
PointSourceFinite: -71.420, 42.509		8.73	5.49	-1.30	71.420°W	42.509°N	0.00	2.76
PointSourceFinite: -71.420, 42.733		30.71	5.87	0.06	71.420°W	42.733°N	0.00	2.74
PointSourceFinite: -71.420, 42.778		35.15	5.96	0.16	71.420°W	42.778°N	0.00	2.55
PointSourceFinite: -71.420, 42.823		39.58	6.04	0.24	71.420°W	42.823°N	0.00	2.32
PointSourceFinite: -71.420, 42.644		21.79	5.70	-0.25	71.420°W	42.644°N	0.00	2.30
PointSourceFinite: -71.420, 42.913		48.44	6.19	0.36	71.420°W	42.913°N	0.00	2.28
PointSourceFinite: -71.420, 42.554		12.91	5.55	-0.83	71.420°W	42.554°N	0.00	1.68
PointSourceFinite: -71.420, 43.003		57.33	6.32	0.46	71.420°W	43.003°N	0.00	1.59
PointSourceFinite: -71.420, 42.958		52.87	6.25	0.41	71.420°W	42.958°N	0.00	1.30
PointSourceFinite: -71.420, 42.868		44.01	6.11	0.31	71.420°W	42.868°N	0.00	1.21
PointSourceFinite: -71.420, 43.093		66.37	6.42	0.56	71.420°W	43.093°N	0.00	1.12
PointSourceFinite: -71.420, 43.048		61.82	6.37	0.51	71.420°W	43.048°N	0.00	1.03
PointSourceFinite: -71.420, 43.183		75.62	6.50	0.67	71.420°W	43.183°N	0.00	1.01

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

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Input

Edition

Dynamic: Conterminous U.S. 2008 (v...

Spectral Period

0.20 Second Spectral Acceleration

Latitude

Decimal degrees

42.4412

Time Horizon

Return period in years

2475

Longitude

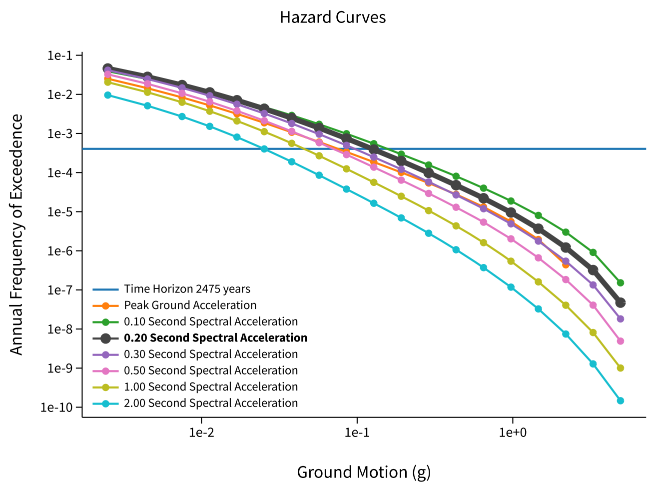
Decimal degrees, negative values for western longitudes

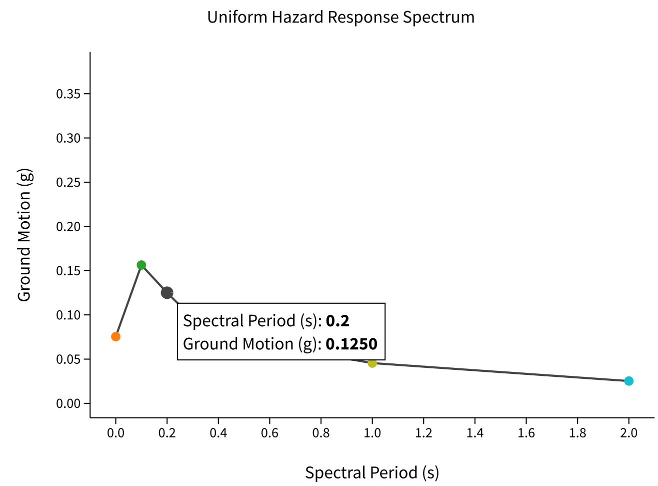
-71.4201

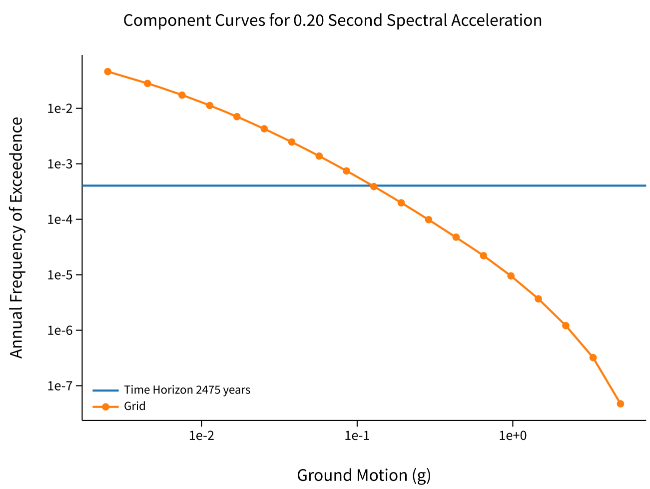
Site Class

2000 m/s (Site class A)

Hazard Curve





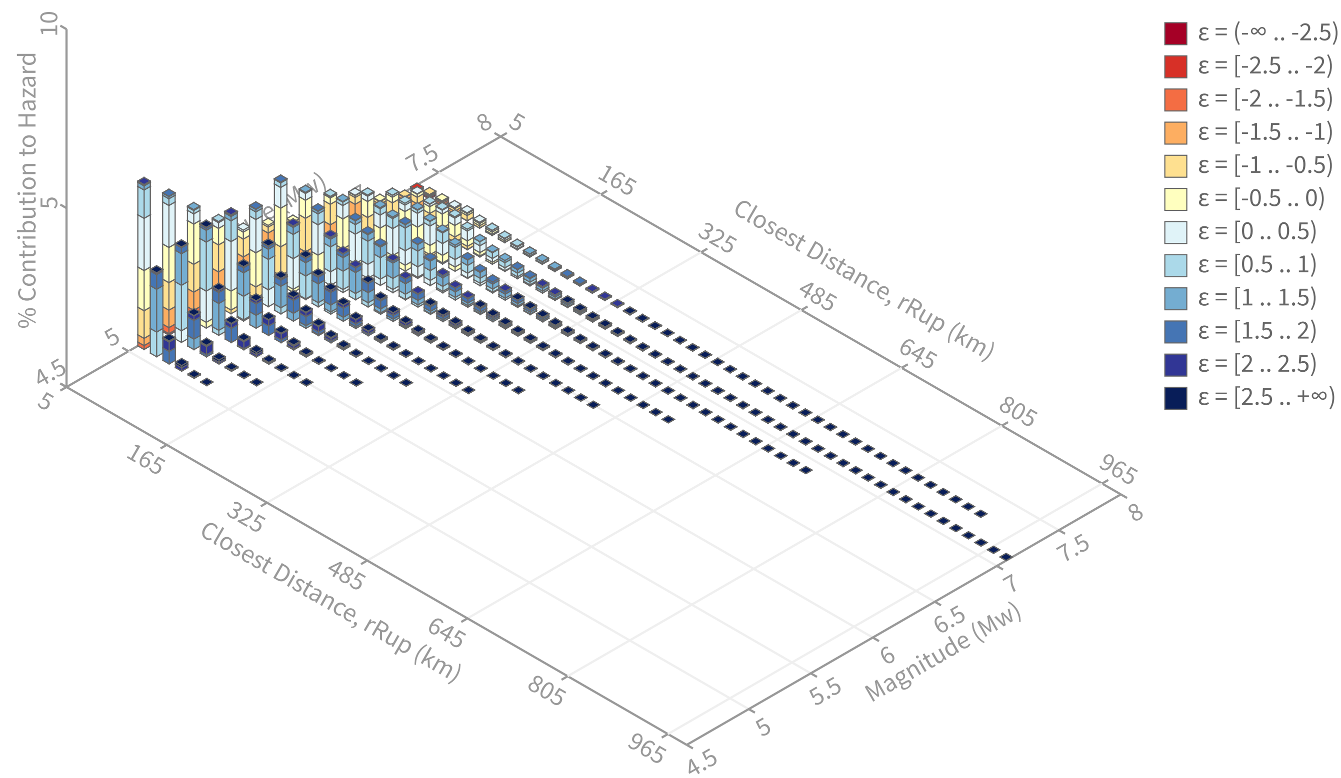


View Raw Data

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
0.2 s SA ground motion: 0.12500882 g

Recovered targets

Return period: 2473.1016 yrs
Exceedance rate: 0.00040435056 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.9 %

Mean (over all sources)

m: 6.15
r: 70.64 km
ε_0: 0.25 σ

Mode (largest m-r bin)

m: 5.1
r: 12.86 km
ε_0: -0.07 σ
Contribution: 4.61 %

Mode (largest m-r-ε_0 bin)

m: 5.11
r: 16.09 km
ε_0: 0.26 σ
Contribution: 1.46 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε0	lon	lat	az	%
CEUS.2007all8.J.in (opt)	Grid							56.31
PointSourceFinite: -71.420, 42.599		17.37	5.62	-0.55	71.420°W	42.599°N	0.00	4.95
PointSourceFinite: -71.420, 42.689		26.45	5.77	-0.14	71.420°W	42.689°N	0.00	3.44
PointSourceFinite: -71.420, 42.733		31.00	5.84	-0.01	71.420°W	42.733°N	0.00	2.95
PointSourceFinite: -71.420, 42.778		35.54	5.91	0.09	71.420°W	42.778°N	0.00	2.81
PointSourceFinite: -71.420, 42.913		49.20	6.11	0.32	71.420°W	42.913°N	0.00	2.68
PointSourceFinite: -71.420, 42.509		8.73	5.49	-1.26	71.420°W	42.509°N	0.00	2.64
PointSourceFinite: -71.420, 42.823		40.08	5.98	0.18	71.420°W	42.823°N	0.00	2.62
PointSourceFinite: -71.420, 42.644		21.90	5.69	-0.32	71.420°W	42.644°N	0.00	2.35
PointSourceFinite: -71.420, 43.003		58.39	6.21	0.44	71.420°W	43.003°N	0.00	1.94
PointSourceFinite: -71.420, 42.554		12.92	5.55	-0.86	71.420°W	42.554°N	0.00	1.62
PointSourceFinite: -71.420, 42.958		53.78	6.16	0.38	71.420°W	42.958°N	0.00	1.56
PointSourceFinite: -71.420, 43.093		67.75	6.29	0.56	71.420°W	43.093°N	0.00	1.42
PointSourceFinite: -71.420, 42.868		44.63	6.05	0.25	71.420°W	42.868°N	0.00	1.40
PointSourceFinite: -71.420, 43.183		77.31	6.34	0.67	71.420°W	43.183°N	0.00	1.37
PointSourceFinite: -71.420, 43.048		63.04	6.26	0.50	71.420°W	43.048°N	0.00	1.29
PointSourceFinite: -71.420, 43.318		91.69	6.41	0.72	71.420°W	43.318°N	0.00	1.26
PointSourceFinite: -71.420, 43.138		72.53	6.32	0.63	71.420°W	43.138°N	0.00	1.21
PointSourceFinite: -71.420, 43.498		111.09	6.47	0.77	71.420°W	43.498°N	0.00	1.17
PointSourceFinite: -71.420, 43.408		101.37	6.44	0.75	71.420°W	43.408°N	0.00	1.12
PointSourceFinite: -71.420, 43.228		82.08	6.37	0.69	71.420°W	43.228°N	0.00	1.11
PointSourceFinite: -71.420, 43.273		86.88	6.39	0.70	71.420°W	43.273°N	0.00	1.03
CEUS.2007all8.AB.in (opt)	Grid							43.69
PointSourceFinite: -71.420, 42.599		17.18	5.67	-0.40	71.420°W	42.599°N	0.00	4.19
PointSourceFinite: -71.420, 42.689		26.02	5.84	-0.05	71.420°W	42.689°N	0.00	2.77
PointSourceFinite: -71.420, 42.509		8.70	5.52	-1.05	71.420°W	42.509°N	0.00	2.44
PointSourceFinite: -71.420, 42.733		30.45	5.93	0.06	71.420°W	42.733°N	0.00	2.35
PointSourceFinite: -71.420, 42.778		34.88	6.01	0.14	71.420°W	42.778°N	0.00	2.21
PointSourceFinite: -71.420, 42.913		48.25	6.21	0.32	71.420°W	42.913°N	0.00	2.10
PointSourceFinite: -71.420, 42.823		39.32	6.08	0.21	71.420°W	42.823°N	0.00	2.05
PointSourceFinite: -71.420, 42.644		21.60	5.76	-0.20	71.420°W	42.644°N	0.00	1.93
PointSourceFinite: -71.420, 43.003		57.25	6.33	0.42	71.420°W	43.003°N	0.00	1.52
PointSourceFinite: -71.420, 42.554		12.82	5.59	-0.69	71.420°W	42.554°N	0.00	1.43
PointSourceFinite: -71.420, 42.958		52.74	6.27	0.37	71.420°W	42.958°N	0.00	1.22
PointSourceFinite: -71.420, 43.093		66.43	6.41	0.52	71.420°W	43.093°N	0.00	1.12
PointSourceFinite: -71.420, 42.868		43.77	6.15	0.27	71.420°W	42.868°N	0.00	1.09
PointSourceFinite: -71.420, 43.183		75.79	6.48	0.63	71.420°W	43.183°N	0.00	1.05
PointSourceFinite: -71.420, 43.048		61.82	6.37	0.47	71.420°W	43.048°N	0.00	1.01

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

Input

Edition

Dynamic: Conterminous U.S. 2008 (v...

Latitude

Decimal degrees

42.4412

Longitude

Decimal degrees, negative values for western longitudes

-71.4201

Site Class

2000 m/s (Site class A)

Spectral Period

0.30 Second Spectral Acceleration

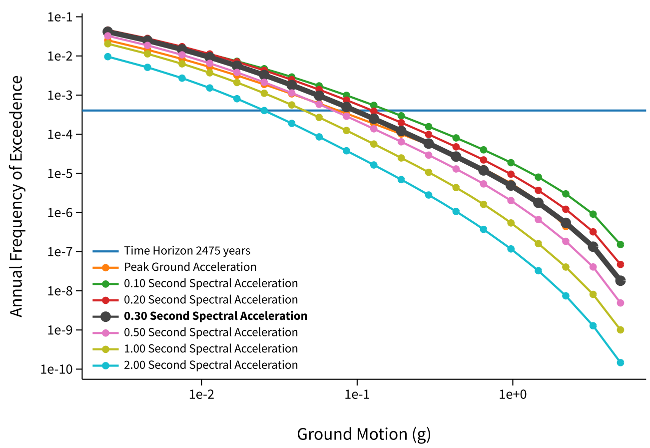
Time Horizon

Return period in years

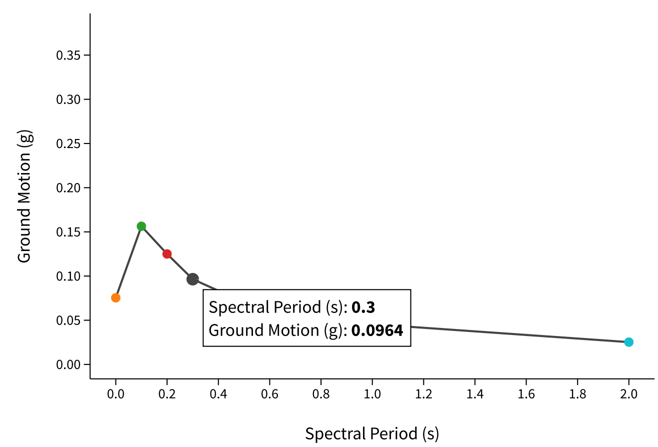
2475

Hazard Curve

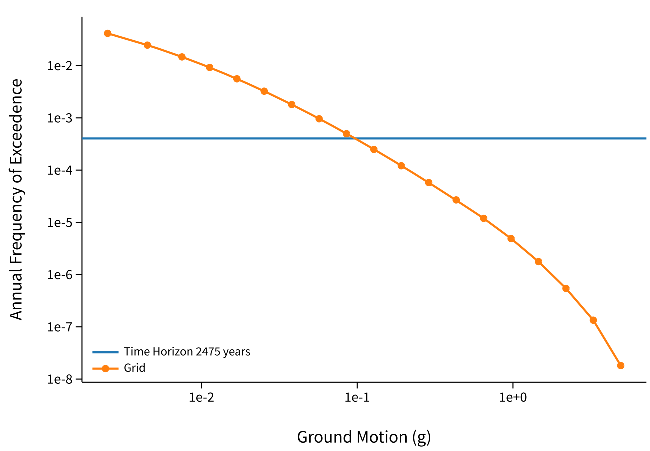
Hazard Curves



Uniform Hazard Response Spectrum



Component Curves for 0.30 Second Spectral Acceleration

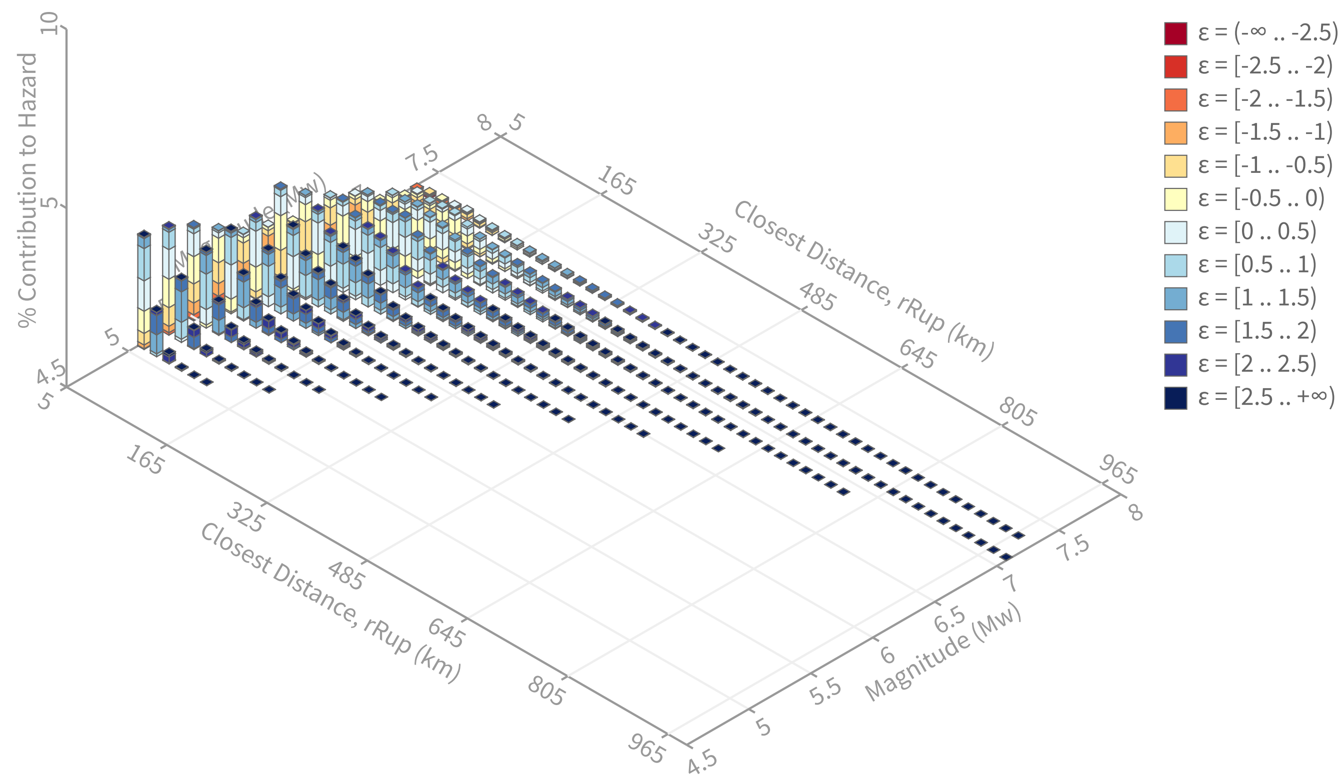


[View Raw Data](#)

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
0.3 s SA ground motion: 0.096444469 g

Recovered targets

Return period: 2467.0278 yrs
Exceedance rate: 0.00040534606 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 1.11 %

Mean (over all sources)

m: 6.27
r: 87.84 km
ε_0: 0.31 σ

Mode (largest m-r bin)

m: 5.1
r: 12.36 km
ε_0: 0.23 σ
Contribution: 3.13 %

Mode (largest m-r-ε_0 bin)

m: 5.89
r: 33.03 km
ε_0: 0.2 σ
Contribution: 1 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
CEUS.2007all8.J.in (opt)	Grid							57.07
PointSourceFinite: -71.420, 42.599		17.20	5.68	-0.50	71.420°W	42.599°N	0.00	4.04
PointSourceFinite: -71.420, 42.689		26.17	5.84	-0.18	71.420°W	42.689°N	0.00	2.83
PointSourceFinite: -71.420, 42.733		30.68	5.92	-0.07	71.420°W	42.733°N	0.00	2.46
PointSourceFinite: -71.420, 42.913		48.86	6.17	0.21	71.420°W	42.913°N	0.00	2.42
PointSourceFinite: -71.420, 42.778		35.20	5.99	0.01	71.420°W	42.778°N	0.00	2.39
PointSourceFinite: -71.420, 42.509		8.69	5.53	-1.06	71.420°W	42.509°N	0.00	2.29
PointSourceFinite: -71.420, 42.823		39.74	6.06	0.09	71.420°W	42.823°N	0.00	2.27
PointSourceFinite: -71.420, 42.644		21.67	5.76	-0.31	71.420°W	42.644°N	0.00	1.91
PointSourceFinite: -71.420, 43.003		58.07	6.27	0.31	71.420°W	43.003°N	0.00	1.82
PointSourceFinite: -71.420, 42.958		53.45	6.23	0.26	71.420°W	42.958°N	0.00	1.43
PointSourceFinite: -71.420, 43.183		77.12	6.37	0.54	71.420°W	43.183°N	0.00	1.40
PointSourceFinite: -71.420, 43.093		67.49	6.34	0.44	71.420°W	43.093°N	0.00	1.39
PointSourceFinite: -71.420, 43.318		91.66	6.42	0.60	71.420°W	43.318°N	0.00	1.35
PointSourceFinite: -71.420, 42.554		12.81	5.60	-0.75	71.420°W	42.554°N	0.00	1.34
PointSourceFinite: -71.420, 43.498		111.21	6.46	0.65	71.420°W	43.498°N	0.00	1.33
PointSourceFinite: -71.420, 43.408		101.41	6.44	0.63	71.420°W	43.408°N	0.00	1.24
PointSourceFinite: -71.420, 42.868		44.29	6.12	0.15	71.420°W	42.868°N	0.00	1.23
PointSourceFinite: -71.420, 43.048		62.74	6.31	0.37	71.420°W	43.048°N	0.00	1.23
PointSourceFinite: -71.420, 43.138		72.30	6.36	0.50	71.420°W	43.138°N	0.00	1.21
PointSourceFinite: -71.420, 43.228		81.95	6.39	0.56	71.420°W	43.228°N	0.00	1.15
PointSourceFinite: -71.420, 43.273		86.80	6.41	0.58	71.420°W	43.273°N	0.00	1.09
PointSourceFinite: -71.420, 43.363		96.53	6.43	0.61	71.420°W	43.363°N	0.00	1.08
CEUS.2007all8.AB.in (opt)	Grid							42.93
PointSourceFinite: -71.420, 42.599		16.93	5.76	-0.36	71.420°W	42.599°N	0.00	3.30
PointSourceFinite: -71.420, 42.689		25.62	5.94	-0.10	71.420°W	42.689°N	0.00	2.21
PointSourceFinite: -71.420, 42.509		8.63	5.57	-0.86	71.420°W	42.509°N	0.00	2.03
PointSourceFinite: -71.420, 42.733		29.99	6.03	-0.02	71.420°W	42.733°N	0.00	1.90
PointSourceFinite: -71.420, 42.913		47.72	6.31	0.18	71.420°W	42.913°N	0.00	1.85
PointSourceFinite: -71.420, 42.778		34.38	6.11	0.04	71.420°W	42.778°N	0.00	1.83
PointSourceFinite: -71.420, 42.823		38.80	6.18	0.09	71.420°W	42.823°N	0.00	1.74
PointSourceFinite: -71.420, 42.644		21.26	5.85	-0.21	71.420°W	42.644°N	0.00	1.52
PointSourceFinite: -71.420, 43.003		56.75	6.41	0.27	71.420°W	43.003°N	0.00	1.40
PointSourceFinite: -71.420, 42.554		12.67	5.66	-0.57	71.420°W	42.554°N	0.00	1.14
PointSourceFinite: -71.420, 42.958		52.22	6.36	0.23	71.420°W	42.958°N	0.00	1.10
PointSourceFinite: -71.420, 43.093		66.00	6.48	0.37	71.420°W	43.093°N	0.00	1.07
PointSourceFinite: -71.420, 43.183		75.47	6.53	0.49	71.420°W	43.183°N	0.00	1.05

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

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Input

Edition

Dynamic: Conterminous U.S. 2008 (v…

Spectral Period

0.50 Second Spectral Acceleration

Latitude

Decimal degrees

42.4412

Time Horizon

Return period in years

2475

Longitude

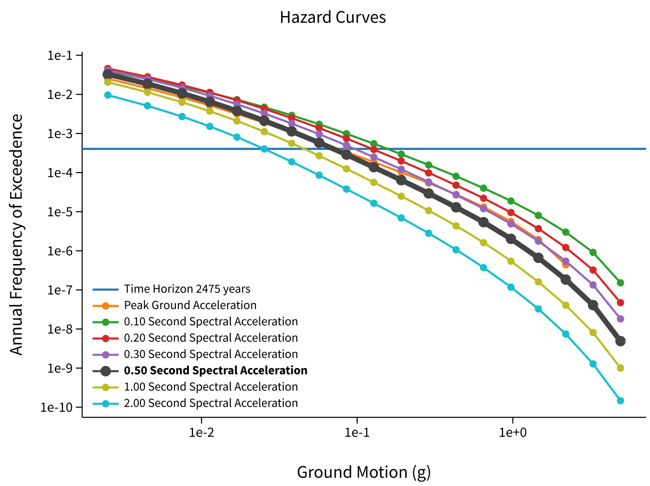
Decimal degrees, negative values for western longitudes

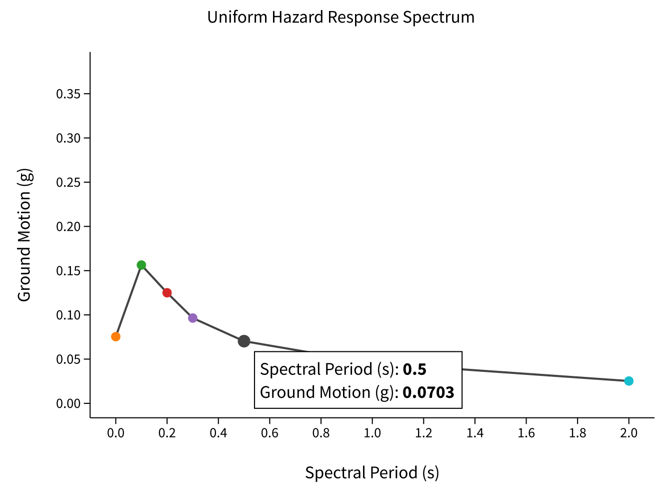
-71.4201

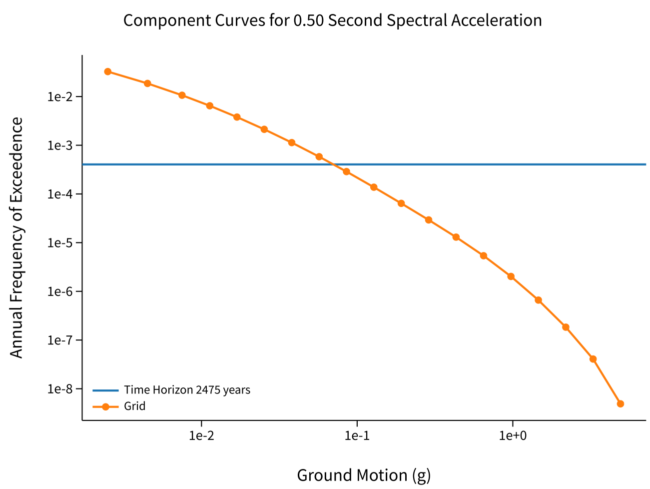
Site Class

2000 m/s (Site class A)

Hazard Curve





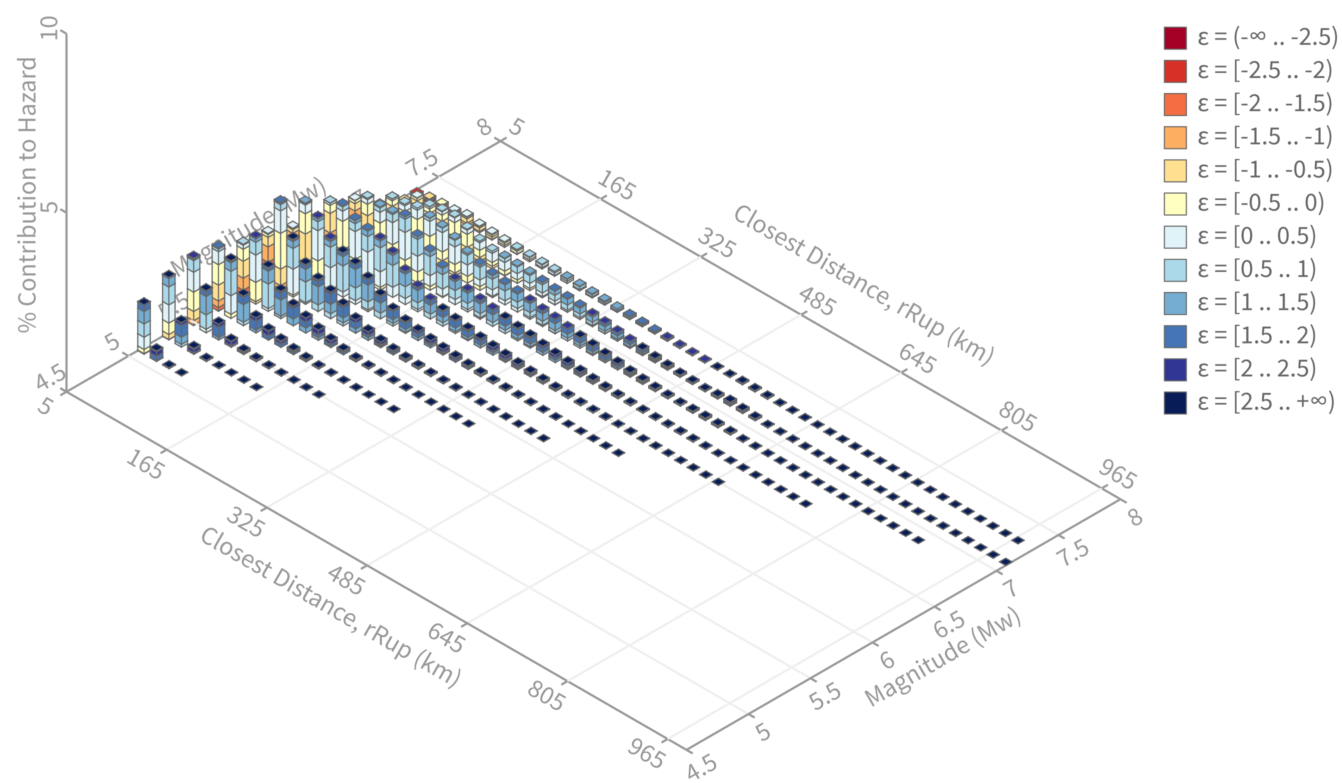


[View Raw Data]

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
0.5 s SA ground motion: 0.070297647 g

Recovered targets

Return period: 2463.5301 yrs
Exceedance rate: 0.00040592157 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 1.17 %

Mean (over all sources)

m: 6.43
r: 117.74 km
ε_0: 0.38 σ

Mode (largest m-r bin)

m: 6.1
r: 30.87 km
ε_0: -0.15 σ
Contribution: 2.43 %

Mode (largest m-r-ε_0 bin)

m: 6.1
r: 31.01 km
ε_0: -0.24 σ
Contribution: 0.99 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε0	lon	lat	az	%
CEUS.2007all8.J.in (opt)	Grid							57.83
PointSourceFinite: -71.420, 42.599		16.84	5.81	-0.48	71.420°W	42.599°N	0.00	2.93
PointSourceFinite: -71.420, 42.689		25.60	5.99	-0.29	71.420°W	42.689°N	0.00	2.11
PointSourceFinite: -71.420, 42.913		48.24	6.28	0.05	71.420°W	42.913°N	0.00	2.07
PointSourceFinite: -71.420, 42.733		30.05	6.06	-0.21	71.420°W	42.733°N	0.00	1.88
PointSourceFinite: -71.420, 42.778		34.54	6.12	-0.14	71.420°W	42.778°N	0.00	1.88
PointSourceFinite: -71.420, 42.823		39.07	6.18	-0.08	71.420°W	42.823°N	0.00	1.84
PointSourceFinite: -71.420, 42.509		8.60	5.62	-0.81	71.420°W	42.509°N	0.00	1.78
PointSourceFinite: -71.420, 43.003		57.54	6.35	0.17	71.420°W	43.003°N	0.00	1.65
PointSourceFinite: -71.420, 42.644		21.19	5.91	-0.37	71.420°W	42.644°N	0.00	1.40
PointSourceFinite: -71.420, 43.498		110.90	6.50	0.53	71.420°W	43.498°N	0.00	1.37
PointSourceFinite: -71.420, 43.183		76.69	6.43	0.41	71.420°W	43.183°N	0.00	1.35
PointSourceFinite: -71.420, 43.318		91.28	6.47	0.47	71.420°W	43.318°N	0.00	1.35
PointSourceFinite: -71.420, 43.093		67.02	6.40	0.30	71.420°W	43.093°N	0.00	1.31
PointSourceFinite: -71.420, 42.958		52.87	6.32	0.11	71.420°W	42.958°N	0.00	1.26
PointSourceFinite: -71.420, 43.408		101.07	6.48	0.51	71.420°W	43.408°N	0.00	1.26
PointSourceFinite: -71.420, 43.138		71.85	6.42	0.37	71.420°W	43.138°N	0.00	1.15
PointSourceFinite: -71.420, 43.048		62.25	6.38	0.24	71.420°W	43.048°N	0.00	1.14
PointSourceFinite: -71.420, 43.228		81.54	6.44	0.43	71.420°W	43.228°N	0.00	1.13
PointSourceFinite: -71.420, 43.363		96.17	6.48	0.49	71.420°W	43.363°N	0.00	1.08
PointSourceFinite: -71.420, 43.273		86.41	6.46	0.45	71.420°W	43.273°N	0.00	1.08
PointSourceFinite: -71.420, 43.633		125.62	6.52	0.56	71.420°W	43.633°N	0.00	1.05
PointSourceFinite: -71.420, 43.723		135.42	6.54	0.59	71.420°W	43.723°N	0.00	1.04
PointSourceFinite: -71.420, 42.868		43.64	6.23	-0.02	71.420°W	42.868°N	0.00	1.03
CEUS.2007all8.AB.in (opt)	Grid							42.17
PointSourceFinite: -71.420, 42.599		16.38	5.93	-0.41	71.420°W	42.599°N	0.00	2.24
PointSourceFinite: -71.420, 42.689		24.81	6.12	-0.27	71.420°W	42.689°N	0.00	1.58
PointSourceFinite: -71.420, 42.913		46.95	6.42	0.01	71.420°W	42.913°N	0.00	1.57
PointSourceFinite: -71.420, 42.509		8.49	5.69	-0.63	71.420°W	42.509°N	0.00	1.45
PointSourceFinite: -71.420, 42.733		29.13	6.20	-0.22	71.420°W	42.733°N	0.00	1.41
PointSourceFinite: -71.420, 42.778		33.50	6.27	-0.16	71.420°W	42.778°N	0.00	1.41
PointSourceFinite: -71.420, 42.823		37.94	6.32	-0.11	71.420°W	42.823°N	0.00	1.38
PointSourceFinite: -71.420, 43.003		56.11	6.49	0.12	71.420°W	43.003°N	0.00	1.26
PointSourceFinite: -71.420, 42.644		20.56	6.03	-0.33	71.420°W	42.644°N	0.00	1.06
PointSourceFinite: -71.420, 43.183		74.96	6.58	0.35	71.420°W	43.183°N	0.00	1.01
PointSourceFinite: -71.420, 43.093		65.44	6.55	0.23	71.420°W	43.093°N	0.00	1.01

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

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Input

Edition

Dynamic: Conterminous U.S. 2008 (v…

Latitude

Decimal degrees

42.4412

Longitude

Decimal degrees, negative values for western longitudes

-71.4201

Site Class

2000 m/s (Site class A)

Spectral Period

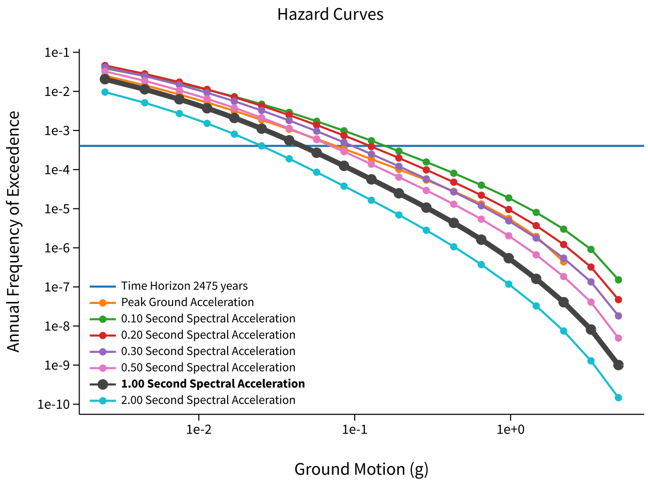
1.00 Second Spectral Acceleration

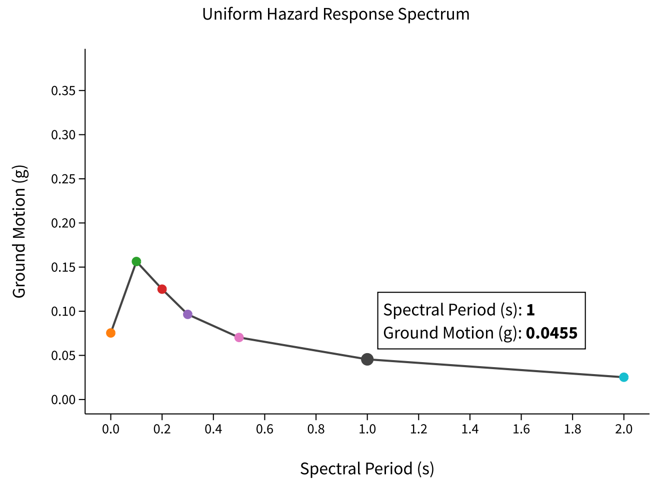
Time Horizon

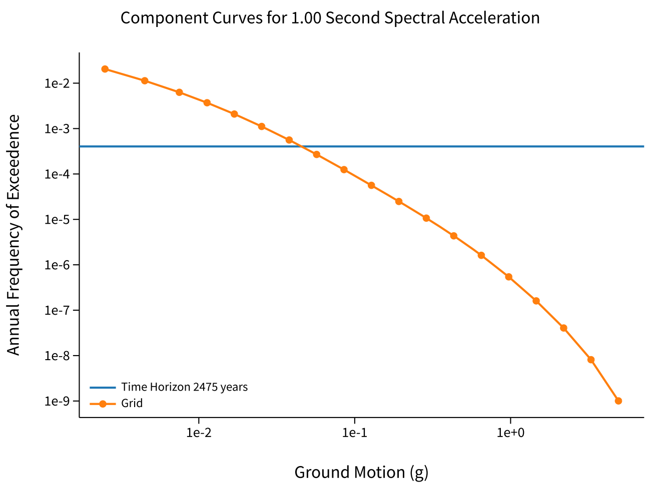
Return period in years

2475

Hazard Curve





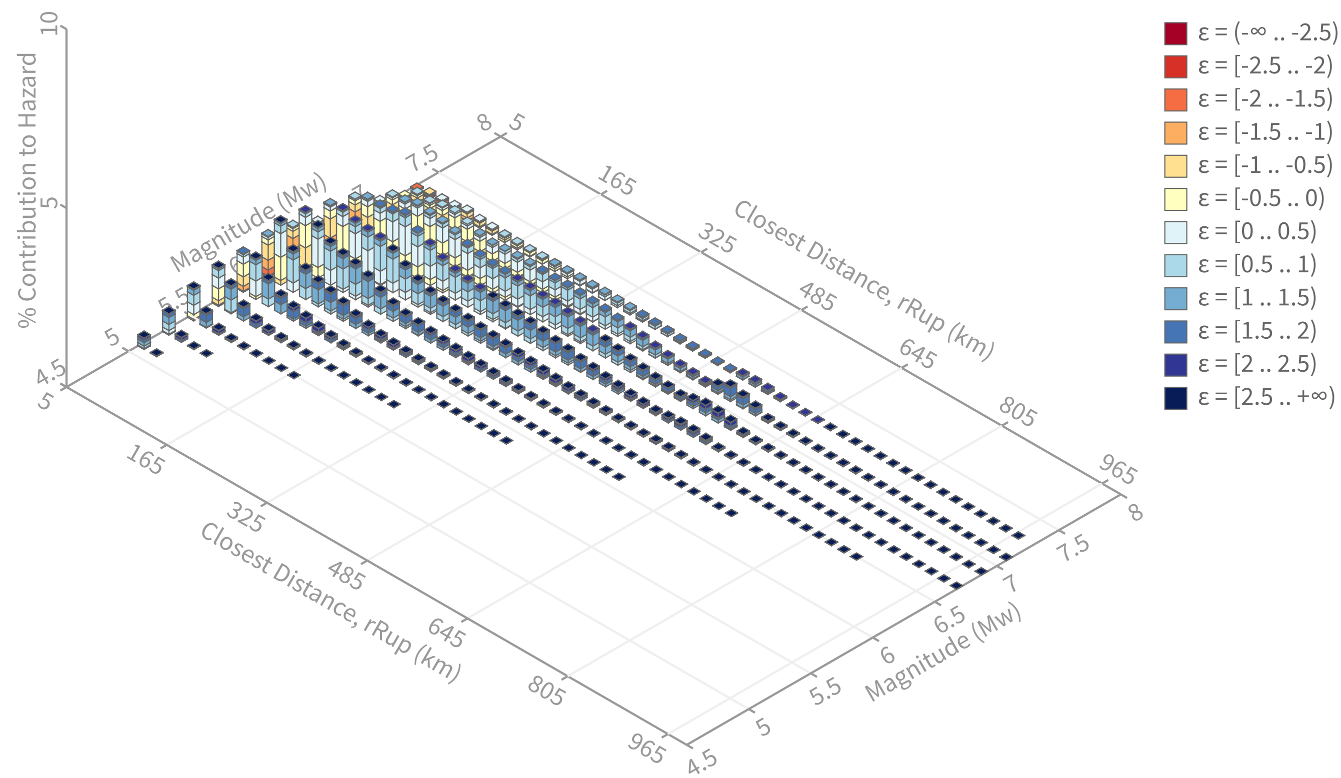


[View Raw Data](#)

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
1.0 s SA ground motion: 0.045528211 g

Recovered targets

Return period: 2461.6827 yrs
Exceedance rate: 0.0004062262 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 1.62 %

Mean (over all sources)

m: 6.59
r: 173.3 km
ε_0: 0.53 σ

Mode (largest m-r bin)

m: 6.1
r: 30.73 km
ε_0: 0.11 σ
Contribution: 1.74 %

Mode (largest m-r-ε_0 bin)

m: 6.7
r: 70.23 km
ε_0: -0.29 σ
Contribution: 0.85 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
CEUS.2007all8.J.in (opt)	Grid							57.33
PointSourceFinite: -71.420, 42.599		16.13	6.01	-0.52	71.420°W	42.599°N	0.00	1.81
PointSourceFinite: -71.420, 42.913		47.50	6.38	-0.02	71.420°W	42.913°N	0.00	1.56
PointSourceFinite: -71.420, 42.689		24.71	6.16	-0.37	71.420°W	42.689°N	0.00	1.38
PointSourceFinite: -71.420, 42.823		38.23	6.31	-0.15	71.420°W	42.823°N	0.00	1.31
PointSourceFinite: -71.420, 42.778		33.66	6.27	-0.22	71.420°W	42.778°N	0.00	1.30
PointSourceFinite: -71.420, 43.003		56.90	6.43	0.11	71.420°W	43.003°N	0.00	1.30
PointSourceFinite: -71.420, 42.733		29.15	6.22	-0.30	71.420°W	42.733°N	0.00	1.27
PointSourceFinite: -71.420, 43.498		110.48	6.54	0.45	71.420°W	43.498°N	0.00	1.22
PointSourceFinite: -71.420, 43.318		90.80	6.52	0.40	71.420°W	43.318°N	0.00	1.16
PointSourceFinite: -71.420, 43.183		76.16	6.49	0.33	71.420°W	43.183°N	0.00	1.13
PointSourceFinite: -71.420, 43.408		100.62	6.53	0.43	71.420°W	43.408°N	0.00	1.10
PointSourceFinite: -71.420, 42.509		8.35	5.79	-0.65	71.420°W	42.509°N	0.00	1.09
PointSourceFinite: -71.420, 43.093		66.45	6.47	0.23	71.420°W	43.093°N	0.00	1.07
CEUS.2007all8.AB.in (opt)	Grid							42.67
PointSourceFinite: -71.420, 42.599		15.52	6.14	-0.51	71.420°W	42.599°N	0.00	1.36
PointSourceFinite: -71.420, 42.913		46.17	6.51	-0.06	71.420°W	42.913°N	0.00	1.19
PointSourceFinite: -71.420, 42.689		23.80	6.29	-0.38	71.420°W	42.689°N	0.00	1.04
PointSourceFinite: -71.420, 43.003		55.45	6.56	0.05	71.420°W	43.003°N	0.00	1.01

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

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Input

Edition

Dynamic: Conterminous U.S. 2008 (v...

Latitude

Decimal degrees

42.4412

Longitude

Decimal degrees, negative values for western longitudes

-71.4201

Site Class

2000 m/s (Site class A)

Spectral Period

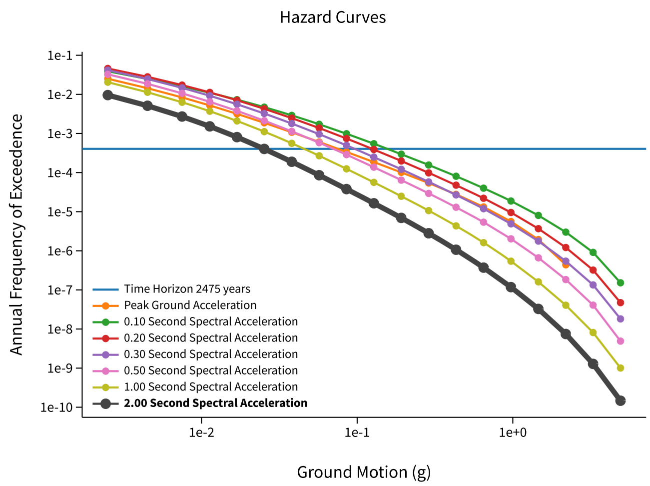
2.00 Second Spectral Acceleration

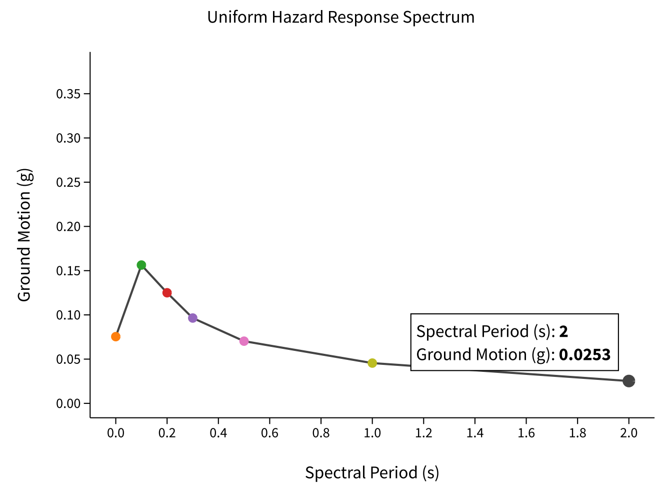
Time Horizon

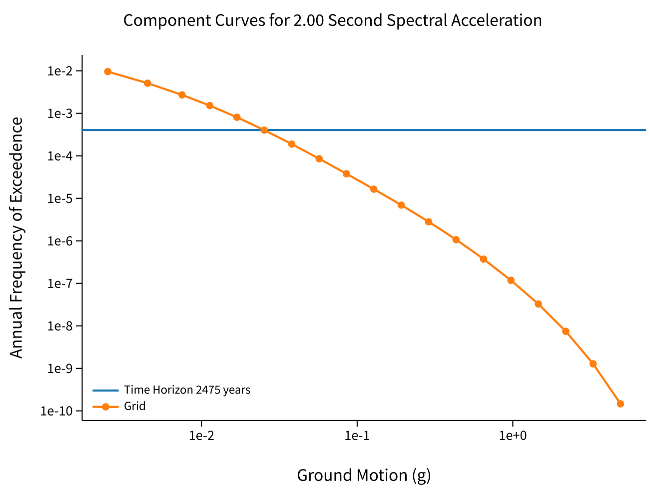
Return period in years

2475

Hazard Curve





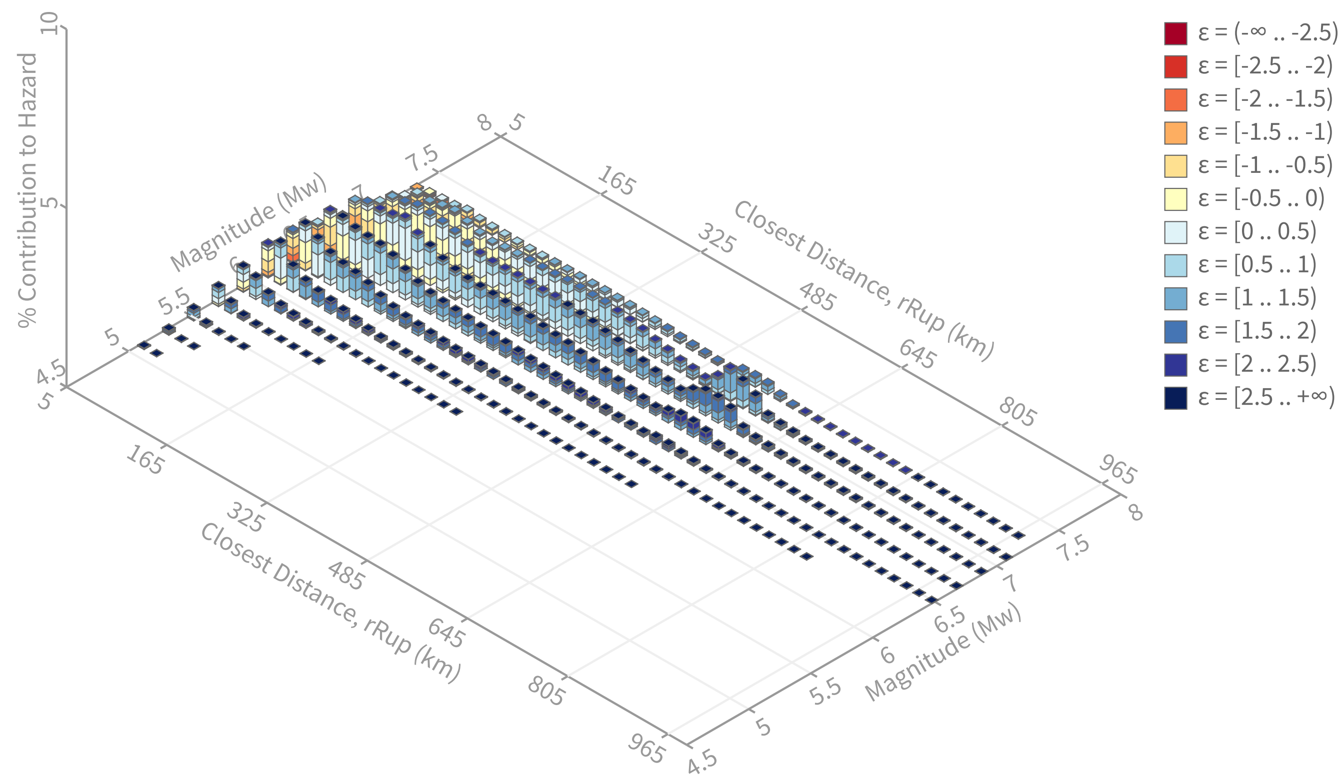


[View Raw Data](#)

^ Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
2.0 s SA ground motion: 0.025251243 g

Recovered targets

Return period: 2474.6667 yrs
Exceedance rate: 0.00040409482 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 1.96 %

Mean (over all sources)

m: 6.72
r: 233.24 km
ε_0: 0.6 σ

Mode (largest m-r bin)

m: 6.7
r: 110.39 km
ε_0: 0.28 σ
Contribution: 1.45 %

Mode (largest m-r-ε_0 bin)

m: 6.69
r: 110.39 km
ε_0: 0.26 σ
Contribution: 0.89 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
CEUS.2007all8.J.in (opt)	Grid							57.36
PointSourceFinite: -71.420, 42.913		46.69	6.47	-0.11	71.420°W	42.913°N	0.00	1.18
PointSourceFinite: -71.420, 42.599		15.30	6.18	-0.64	71.420°W	42.599°N	0.00	1.17
PointSourceFinite: -71.420, 43.498		109.79	6.61	0.35	71.420°W	43.498°N	0.00	1.02
PointSourceFinite: -71.420, 43.003		56.14	6.52	0.02	71.420°W	43.003°N	0.00	1.01
CEUS.2007all8.AB.in (opt)	Grid							42.64

APPENDIX C

HB-3 - Slurry Wall Mix Designs for Bench-Scale Testing

PDI HB-3: Bench Scale Testing of Slurry and Wall Mix Designs

1 Scope of Work

The purpose of this Pre-Design Investigation (PDI) activity for the holding basin (HB), HB-3, for the containment wall was to investigate the trench slurry mix design and barrier wall concrete mix design needed to meet the HB specific remedial action outlined in the Record of Decision (ROD). Activities performed in accordance with the HB PDI Work Plan (Work Plan) to meet the objectives of this PDI included:

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin	Identify mix design information in support of a performance-based specification for the barrier wall construction. Assist contractors with selection of materials and mix designs as they prepare bids for barrier wall construction.	• Identify potential type and percentage of bentonite to be used in slurry for temporary support of excavated panels for containment wall • Evaluate potential concrete backfill mix designs to satisfy minimum required permeability and strength criteria • Evaluate mix design materials and their potential interactions with radiologically impacted media

Haley & Aldrich, Inc. (Haley & Aldrich) will evaluate potential concrete backfill mix designs to satisfy the minimum required permeability and strength criteria established during the PDIs for the 30% Design.

Agency review and confirmation on proposed hydraulic conductivity requirements summarized in Appendix E, HB-5 Seepage Analysis, is necessary before finalizing mix design selections and completing hydraulic conductivity testing. As such, a literature review of types of mixes and range of hydraulic conductivity achieved is included within this report but laboratory testing on the proposed mix designs has not yet been conducted.

2 Summary of Work

2.1 GENERAL METHODS AND PROCEDURES

Research for the concrete mix design included a literature review with a focus on articles which described individual mix design studies or included general recommendations on concrete mix designs. The articles which included information that was incorporated into the evaluation are listed in the References section of this report.

Work was completed in two parts: a review of mixture additives and a review of applicable mixture additive ratios. The review of mixture additives included gathering information for a variety of commonly used materials including Portland cement, bentonite, blast furnace slag, water, silica fume, coarse and fine aggregates, xypex, and dye (sometimes used to show joint completion). Properties such as the material's effect on hydraulic conductivity, flexibility, ability to contain radiological contamination, longevity, and pH effects were considered. Materials with optimal properties, according to site specific conditions for the HB containment wall, were selected for further evaluation. Longevity considerations are based on the EPA Record of Decision (ROD) criteria specifying that the containment wall should be constructed to be maintained for a minimum of 200 years.

The second part of the concrete mix design research involved looking at various proportions of concrete mixture additives as described in different case studies. Articles reviewed typically provided their mixture additive designs (mix designs) data in terms of cement factor, bentonite percentage, water/cement ratio, and coarse to fine aggregate ratios. For articles that contained hydraulic conductivity results aligning with design criteria, the mix design data was incorporated into a calculations spreadsheet to convert mix design data provided in like-terms for each mix design material. Mix designs were then compared across the seven mix designs summarized in the calculations spreadsheet. The calculations spreadsheet will continue to be updated throughout the design process, but the information reviewed during this PDI is included as Exhibit HB3-1. Mix designs considered for the HB containment wall are described in Section 5.2.

2.2 DESIGN CRITERIA

Design criteria generated during these PDIs (permeability and strength) for the HB containment wall were accounted for when evaluating mix designs.

The permeability or hydraulic conductivity of the concrete containment wall must be smaller than the overburden and rock layers, including the weathered and competent bedrock surrounding it, to effectively contain impacted groundwater in the HB. The results of groundwater seepage modeling discussed in the HB-5 PDI summary report (Appendix E) identified a target hydraulic conductivity of approximately $1x10^{-8}$ to $1x10^{-6}$ centimeters per second (cm/s) for the HB containment wall. Mix design studies evaluated for this PDI achieved hydraulic conductivities in containment walls ranging from $1 X 10^{-10}$ to $1 X 10^{-6}$ cm/s.

Strength results were evaluated as the HB containment wall will need to withstand both static and seismic stresses beneath the ground surface while also being flexible enough to undergo potential seismic deformations. Strength tests typically performed during a mix design test, as observed in the literature review, include confined and unconfined compressive strength tests and axial strain tests. Typically, a triaxial consolidated undrained (CU) test on cylindrical samples is also used to determine strength and permeability data in a laboratory setting. A wide variety of strength results were seen across the mix designs evaluated. A more specific strength requirement for the HB containment wall will be identified during the 30% Remedial Design (30% RD) phase of the project.

2.3 RADIOLOGICAL FACTORS AND OTHER INTERACTIONS

The interactions between the concrete wall and radiological contamination within the HB and other site chemicals was also considered as part of this PDI. A review of mix design studies applicable to radiological sites indicate that the materials and compositions used to contain radiological waste are similar to the materials considered for the HB containment wall, as described in Section 5.1.

Additionally, a preliminary review of potential interactions between chemicals planned for In-Situ Stabilization (ISS, described under separate cover) admixtures and the concrete mixture additives was performed. Phosphates, found in injection admixtures, was identified as having the potential to retard setting of concrete and influence the mechanical properties of the concrete mixture (Jarsosalva Kotatkova, 2017)[1] and will be evaluated during the design.

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[1] Refer to item 4 in the list of References.

3 Deviations from Work Plan

The research conducted on concrete mix designs allowed Haley & Aldrich to identify potential concrete mixture additives and proportions for the HB containment wall concrete mix as described in Section 4.1. However, the final mix designs and specific materials were not selected for laboratory testing and laboratory testing was not conducted as a part of this PDI, as described in the Work Plan. As strength and permeability criteria for the HB containment wall are more refined throughout the 30% RD phase of the project, the mix designs will be selected, and laboratory tested.

Additionally, the PDI focused more on the containment wall concrete backfill mix design and did not include the slurry mix design for temporary support of excavated panels. The type and percentage of bentonite to be used in the slurry mix will be selected as a part of the 30% RD phase of the project.

4 Results

4.1 CONCRETE MIX DESIGN MATERIALS AND PROPORTIONS

Plastic concrete, which is more ductile than conventional concrete, was a focus of the research and will be considered for the HB containment wall due to its optimal permeability and strength characteristics along with its ability to deform without cracking with the surrounding soils, as opposed to conventional concrete which has an inherent brittleness and is prone to cracks. Plastic concrete consists of aggregate, cement, water, and bentonite mixed at high water to cement ratios, whereas conventional concrete does not typically include a substantial percentage of bentonite. The mixture additives that will be further considered for the HB containment wall are cement, bentonite, coarse and fine aggregate, water, and blast furnace slag. Many mix designs were considered as part of the literature review process and narrowed down based on their similarity to Holding Basin wall site conditions and strength and permeability results. The beneficial characteristics of each material and range of proportions, in percent by weight, seen in the mix design studies cited in the references section are summarized as follows. Seven mix designs that provided clear constituent proportions and permeability and strength results are also presented in the calculation spreadsheet included as Exhibit HB3-1.

- Cement and Bentonite: Typically, the addition of bentonite clay to a concrete mix will increase the ductility and plastic deformation as well as the permeability of the concrete but reduces its shear strength. The ratio of cement to bentonite, often referred to together by weight as the cement factor, should be balanced to maintain strength of the concrete. Cement percentages by weight seen throughout the mix design studies ranged from approximately 4 to 12 % cement. Bentonite percentages by weight seen throughout the mix design studies ranged from approximately 0 to 6%.

- Coarse and Fine Aggregates: Aggregates are an important component of concrete for thermal and elastic properties and provide compressive strength and bulk to the concrete. Coarse aggregates reduce the strain at failure of plastic concrete. Aggregates typically make up the highest percentage by weight across the mix design studies evaluated, with coarse aggregate percentages ranging from 25 to 48 % and fine aggregate percentages ranging from 31 to 42 %.

- Water: Plastic concrete is typically mixed at a high cement to water ratio. Percentages of water by weight seen throughout the mix designs studies ranged from 8 to 42 %.

- Blast Furnace Slag: Slag is shown to reduce permeability of the concrete mix while also helping maintain longer term compressive and flexural strengths. It is usually ground to a certain fineness and used to replace a portion of cement in the concrete mix. Limited studies reviewed during this PDI have used blast furnace slag, so a range of percentages was not obtained.

Several other concrete mix materials were considered, including sulfoaluminate concrete, Xypex, and silica fume. Those materials will not be considered moving forward due to limited information, low availability, or cost.

A summary of the results from the seven mix designs tabulated in the calculation package shown as Exhibit HB3-1 is provided below. The order of mix designs corresponds to the table in Page 3 of the calculation package.

MIX DESIGN	SUMMARY OF MIX DESIGN
Plastic Concrete Cutoff walls for Earth Dams (CIUC Highest Permeability and Highest Strength mix)	• Description: United States Army Corps of Engineers (USACE) study evaluating compression, tensile, and flexural behavior and permeability of plastic concrete for multiple mix designs • Site specific considerations: No radiological contamination; tests were performed in the lab but not implemented at a site • Pertinent Information: Permeability and strength requirements anticipated to be similar to Site.
Comparison of grout mixes and plastic concrete (9th conference on ICSMFE) [Habib 1977])	• Description: A research program comparing triaxial stress-strain-strength relationships and permeability for a specific mix design • Site specific considerations: No radiological contamination; tests were performed in the lab but not implemented at a site • Pertinent Information: Plastic concrete was shown to have a greater strain at failure than grout
Mud Mountain Dam (US Army Corps MMD Research Program)	• Description: USACE installed a plastic concrete diaphragm cutoff wall in the core of 425 ft high dam as a seepage barrier. The site is located on the White River in Enumclaw, Washington. • Site specific considerations: No radiological considerations; wall already installed. • Pertinent Information: Unconfined compressive strength, flexural strength and elastic modulus were shown to decrease with the addition of bentonite to the mix.
Bucknell University research Program (Evans, Stahl, Drooff 1987)	• Description: A research study from Bucknell University specific to plastic concrete wall use for sealing landfills; Nine mix designs were evaluated. Fly ash and bottom ash were used for several of the mixes in addition to standard mix design constituents • Site specific considerations: No radiological contamination; tests were performed in the lab but not implemented at a site • Pertinent Information: Plastic concrete was shown to have a lower permeability and greater resistance to contaminated material compared to other mixes

PDI HB-3: Bench Scale Testing of Slurry and Wall Mix Designs

MIX DESIGN	SUMMARY OF MIX DESIGN
New Conquitlam Dam Plastic Concrete Cutoff Wall (L. Yan, DA Trapp, A Sy, 2008)	• Description: Mix design for the Coquitlam Dam, a 30-meter-high hydraulic fill embankment located in British Columbia, Canada • Site specific considerations: Seismic criteria was considered; no radiological contamination • Pertinent Information: Plastic concrete was selected because it was flexible enough to undergo seismic deformations, without cracking, with the surrounding soils
Durability Aspects of High performance Concretes for Waste Repository	• Description: Mix Design from the Atomic Energy of Canada for disposal of low-level radioactive waste at the Chalk River Nuclear Laboratories in Ontario, Canada • Site specific considerations: Radiological contamination; relies on the durability of concrete for a 500-year service life (compared to 200-years required for Holding Basin wall) • Pertinent Information: The mix designs containing blast furnace slag which replaced Type 50 cement showed the lowest permeability and had the highest resistance to radiological degradation

5 Summary of Future Design Considerations

Approximately five (5) mix designs will be selected for laboratory testing containing varying mix ratios of the materials described in Section 2.1. For Phase I testing, the five (5) mix designs will be submitted to a laboratory for strength and permeability testing. The strength testing will expected occur as a triaxial compressive strength testing on concrete cylinders at ages of 7, 14, and 28 days in accordance with American Society for Testing and Materials (ASTM) D1633-17: Standard Test Methods for compressive Strength of Molded Soil-Cement Cylinders. Laboratory Phase I permeability testing will with potable water from the lab in accordance with ASTM D5084-16a: Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter.

The two (2) concrete mixes that achieve permeabilities and strengths most aligned with design criteria described in Section 2.2 during Phase I laboratory testing will be selected for Phase II testing, which will evaluate the mix performance in relation to site conditions at the HB. Phase II permeability testing will use site groundwater obtained from wells at the HB as the permeant. Tests will be run with site groundwater obtained from four (4) different screened intervals (overburden sand and gravel, glacial till, shallow bedrock, and deeper bedrock). The groundwater in some of these screened intervals is anticipated to have low level radioactive impacts, and this additional permeability testing will be performed at a laboratory licensed to handle such materials (Advanced Terra Testing, Inc., Lakewood, CO). As an initial screening of changes in chemistry from the concrete mix, pH and alkalinity of the influent and effluent will be tested during each of these permeability tests.

Results of testing will be included in contract documents to provide contractors with an example of potential mix designs that will achieve design criteria. During construction, contractors will be responsible for preparing a suitable mix design based on materials and admixtures that they propose to use to satisfy the performance-based specification.

References

1. International Atomic Energy Agency. *Performance of Engineered Barrier Materials Near Surface Disposal Facilities for Radioactive Waste.* November 2001.
2. Nuclear Energy Agency. *Cementitious Materials in Safety Cases for Geological Repositories for Radioactive Waste: Role, Evolution, and Interactions.* April 2012.
3. USEPA Office of Radiation and Indoor Air Radiation Protection Program. *Technology Reference Guide for Radioactively Contaminated Media.* October 2007.
4. Jarsosalva Kotatkova, Jan Zatloukal, Pavel Reiterman, Karel Kolar. *Concrete and Cement Composites Used for Radioactive Waste Deposition*. 2017.
5. Department of the Army. *Plastic Concrete Cutoff Walls for Earth Dams.* 30 April 1991.
6. Slag Cement Association 2021. *Slag Cement Benefits and Use in Concrete.* Accessed 18 November 2021 at https://www.slagcement.org/resources/news/articleid/2/slag-cement-benefits-and-use-in-concrete.aspx.
7. October 1994. *Guide to Using Silica Fume in Precast/Prestressed Concrete Products*. Accessed 18 November 2021 at https://www.pci.org/PCI_Docs/Design_Resources/Guides_and_manuals/references/bridge_design_manual/JL-94-September-October_Guide_to_Using_Silica_Fume_in_Precast_Prestressed_Concrete_Products.pdf.
8. Elgouhary, Mohamed, Koziol, Daniel, Taylor, Jeff, *Seepage Barrier at Bolivar Dam,* No Date.
9. L. Yan, D. A. Trapp, A Sy. *Construction of a Plastic Concrete Seepage Cutoff Wall for the New Conquitlam Dam*. Accessed 29 November 2021 at https://scholarsmine.mst.edu/cgi/viewcontent.cgi?article=2809&context=icchge. 15 August 2008.
10. M. Srinivasula Reddy, P Dinakar, B. Hanumantha Rao, *Mix Design Development of Fly Ash and Ground Granulated Blast Furnace Slag*, Journal of Building Engineering. 8 September 2018.

ATTACHMENTS

EXHIBITS

Exhibit HB3-1 – Concrete Mix Design Ratio Review

EXHIBIT HB3-1

Concrete Mix Design Ratio Review

PROBLEM STATEMENT & OBJECTIVE

1. Calculate concrete barrier wall constituent percentages in a mix and select ratio for mix design.

REFERENCES

1. Department of the Army. Plastic Concrete Cutoff Walls for Earth Dams. 30 April 1991.
2. L. Yan, D. A. Trapp, A Sy. Construction of a Plastic Concrete Seepage Cutoff Wall for the New Conquitlam Dam. Accessed 29 November 2021 at https://scholarsmine.mst.edu/cgi/viewcontent.cgi?article=2809&context=icchge. 15 August 2008.
3. M. Srinivasula Reddy, P Dinakar, B. Hanumantha Rao, Mix Design Development of Fly Ash and Ground Granulated Blast Furnace Slag, Journal of Building Engineering. 8 September 2018.
4. K.E. Philipose, Atomic Energy of Canada Limited, Durability Aspects of High Performance Concretes for a Waste Repository.

ASSUMPTIONS & DEFINITIONS

1. Cement Factor (per cubic yard of concrete): $\dfrac{\text{(Weight of Cement + Weight of Bentonite)}}{\text{Cubic Yard of Concrete}}$

2. Percent Bentonite: Percent of Cement Factor, by weight, which is bentonite = (Weight of Bentonite/Cement Factor)*100

3. Water-Cement Ratio: $\dfrac{\text{Weight of Water}}{\text{Weight of Cement + Weight of Bentonite}}$

4. Average weight of a cubic yard of concrete is 4,050 lbs; This weight is assumed for studies that did not provide a unit weight of their mix (highlighted brown)[3]

UNIT CONVERSIONS

1 lb/ft^3 = 27 lb/yd^3
1 kg/m^3 = 1.6855 lb/yd^3

MATERIAL PROPERTIES

Wall Mix Design	Cement Factor (lb/yd3)	Unit Weight of mix (lb/ft^3)	Bentonite Percentage (In Cement Factor)	Water to Cement Ratio	Coarse to Fine aggregate Ratio
Plastic Concrete Cutoff walls for Earth Dams (CIUC Highest Permeability mix)$_1$	364	144.7	40	1.5	1
Plastic Concrete Cutoff walls for Earth Dams (CIUC Highest Strength mix)$_1$	328	150	0	1	1
Comparison of grout mixes and plastic concrete (9th conference on ICSMFE) (Habib 1977)$_1$	409	-	63	1.7	1
Mud Mountain Dam (US Army Corps MMD Research Program)$_1$	300		-	1.78	-

Note: The subscript numbers on Wall Mix Designs correspond to the Reference number. Reference 1 contained multiple mix designs.

HALEY ALDRICH	CALCULATIONS	File No.:	131884-003
		Sheet:	2 of 3
Client:	de maximis, inc.	Date:	16-Sep-2022
Project:	Nuclear Metals, Inc.	Computec	JLW
Subject:	Concrete Mix Design Ratio Review	Checked E	MMS

Wall Mix Design	Weights of Constituents							
	Unit Weight of mix (lb/yd^3)	Total Weight of Cement (lb/yd^3)	Total Weight of Blast Furnace Slag (lbs/yd^3)	Total Weight of Cement and Blast Furnace Slag (lbs/yd^3)	Total Weight of Bentonite (lb/yd^3)	Total Weight of Water (lbs/yd^3)	Total Weight of Coarse and Fine Aggregate (lbs/yd^3)	
Plastic Concrete Cutoff walls for Earth Dams (CIUC Highest Permeability mix)$_1$	3906.9	218.4	-	-	145.6	546.0	2996.9	
Plastic Concrete Cutoff walls for Earth Dams (CIUC Highest Strength mix)$_1$	4050.0	328.0	-	-	0.0	328.0	3394.0	
Comparison of grout mixes and plastic concrete (9th conference on ICSMFE) (Habib 1977)$_1$	4050.0	151.3	-	-	257.7	695.3	2945.7	
Mud Mountain Dam (US Army Corps MMD Research Program)$_1$	4050.0	180.0	-	-	120.0	535.1	-	-
Bucknell University research Program (Evans, Stahl, Drooff 1987)$_1$	-	-	-	-	-	-	-	-
							Coarse	Fine
New Conquitlam Dam Plastic Concrete Cutoff Wall (L. Yan, DA Trapp, A Sy, 2008)$_2$	2922.7	244.4	-	-	48.9	569.7	1314.7	1608.0
Durability Aspects of High performance Concretes for Waste Repository$_4$	-	-	-	-	-	-	-	-

Note: The subscript numbers on Wall Mix Designs correspond to the Reference number. Reference 1 contained multiple mix designs.

HALEY ALDRICH	CALCULATIONS	File No.:	131884-003
		Sheet:	3 of 3
Client:	de maximis, inc.	Date:	16-Sep-2022
Project:	Nuclear Metals, Inc.	Computed	JLW
Subject:	Concrete Mix Design Ratio Review	Checked b	MMS

	Final Percentage of Constituents (By Weight)								Test Result Notes	
	Cement (%)	**Bentonite (%)**	**Water (%)**	**Fine Aggregate (%)**	**Coarse Aggregate (%)**	**Blast Furnace Slag (%)**	**Fly Ash (%)**	**Total Percentage Check (%)**	**Permeability (cm/s)**	**Strength**
Plastic Concrete Cutoff walls for Earth Dams (CIUC Highest Permeability mix)$_1$	**5.59**	**3.73**	**13.98**	**38.35**	**38.35**	**-**	**-**	**100.00**	9.5 X 10^{-10}	Shear Strength: 697 psi
Plastic Concrete Cutoff walls for Earth Dams (CIUC Highest Strength mix)$_1$	**8.10**	**0.00**	**8.10**	**41.90**	**41.90**	**-**	**-**	**100.00**	3.1 X10^{-9}	Shear Strength: 1461 psi
Comparison of grout mixes and plastic concrete (9th conference on ICSMFE) (Habib 1977)$_1$	**3.74**	**6.36**	**17.17**	**36.37**	**36.37**	**-**	**-**	**100.00**	Between 0.5 and 2.1 * 10^{-6}	No clear shear or strength value given
Mud Mountain Dam (US Army Corps MMD Research Program)$_1$	**4.44**	**2.96**	**13.21**	**31.38**	**48.00**	**-**	**-**	**100.00**	3.2-4.0 X10^{-8}	Pressure Test: Compressive Strength: 620 psi Flexural Strength: 70 psi Percent strain at ultimate load: 0.18
Bucknell University research Program (Evans, Stahl, Drooff 1987)$_1$	**12.40**	**4.10**	**17.00**	**41.60**	**24.90**	**-**	**-**	**100.00**	0.5X10^{-7}	Shear Strength: 3427 kpa (497 psi) Axial Strain at failure: 10 %
New Conquitlam Dam Plastic Concrete Cutoff Wall (L. Yan, DA Trapp, A Sy, 2008)$_2$	**8.36**	**1.67**	**19.49**	**44.98**	**55.02**	**-**	**-**	**129.53**	Less than 2.0 X 10^{-7} met in concrete cylinder testing	-Stress Test Results achieved: triaxial consolidated undrained (CU) test under a confining stress of 300kPA - Unconfined compressive strength: 2.17 MPa at 28 days
Durability Aspects of High performance Concretes for Waste Repository	**12.76**	**-**	**42.00**	**-**	**-**	**43.50**	**1.74**	**100.00**	-	-

Note: The subscript numbers on Wall Mix Designs correspond to the Reference number. Reference 1 contained multiple mix designs.

\\haleyaldrich.com\share\bos_common\131884-NMI\PDI Summaries\Holding Basin\HB-3\Exhibit HB3-1-Calculation Package\[2022-0906-Calc Sheet Barrier Wall Mixing Design-D5.xlsx]Sheet 2

APPENDIX D

HB-4 - Cover Design and Slope Stability Analysis

PDI HB-4: Holding Basin Cover and Side Slopes of Cooling Pond and Bog Area Summary

1 Introduction

The purpose of this Pre-Design Investigation (PDI) for the Holding Basin (HB), HB-4, was to investigate the geotechnical properties of soils in the HB and at selected transects along slopes of the Sphagnum Bog, Landfill, and Cooling Pond. Activities performed in accordance with the HB PDI Work Plan (Work Plan) to meet the objectives of this PDI include:

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin Cover and Side Slopes of Cooling Pond and Sphagnum Bog Areas	Cover Design and Slope Stability Analysis	• Complete up to four (4) borings into Holding Basin to collect geotechnical data necessary for cover system design. • Complete hand probes to determine organics thickness within Sphagnum Bog, and soft sediment thickness of sediments in Cooling Pond. • Complete hand probes along slopes adjacent to the Holding Basin and Cooling Pond to evaluate near surface soil conditions. • Collect field vane shear measurements on organics located within the bog. • Complete two (2) test pits behind the Gabion Wall south of the Cooling Pond to evaluate the wall cross-section. • Conduct plumbness survey of the Gabion Wall face at up to two (2) transects. • Conduct slope stability analysis for proposed finished grades of Holding Basin Cap and adjacent side slopes, and side slopes adjacent to bog and Cooling Pond.

These areas were investigated to determine subsurface conditions and establish geotechnical parameters to be used in the evaluation of slope stability for existing conditions and conditions during proposed remedial activities at the site. By completing the outlined scope of work, Haley & Aldrich, Inc. (Haley & Aldrich) was able to obtain the following information:

- Characterization of the surficial layers of the slopes to develop surficial subsurface profiles to be used in the slope stability analyses;
- Completion of a slope stability analysis and evaluation of potential need for temporary excavation support during sediment removal along the edge of the Sphagnum Bog; and
- A pre-construction assessment of the Gabion Wall plumbness and condition.

2 Summary of Work

The following explorations and associated soil sampling were completed during or in support of PDI activities for HB-4:

WORK AREA	TASK	EXPLORATION TYPES
Holding Basin	*Geotechnical Data Collection**	Standard penetration test (SPT) borings, with rock coring
Bog**	*Sediment Evaluation***	Hand probing, hand augers, soil sample collection
	*Slope Stability***	
Gabion Wall**	*Test Pits***	Confirmatory excavations at wall locations
	*Slope Stability***	Hand probing, hand augers, soil sample collection
Landfill **	*Geophysical Survey***	GPR and EM surveys
	*Test Pits***	Confirmatory excavations at survey locations
Cooling Pond**	*Piezometers (GW)***	Piezometer installation, groundwater sampling from piezometers, surface water sampling, sediment sampling

Notes:

* Note that although several tasks were previously described in the Work Plan as falling under HB-1, these activities were also associated with tasks and activities to be completed under the PDI activities for HB-4. Therefore, certain tasks related to HB-1 are discussed in this PDI summary for HB-4 (boring installations).

**Note that although several tasks were previously described in the Work Plan as falling under activities conducted as part of Site Wide Soils and Sediment PDI 4 (SSS-4), these activities were also associated with tasks and activities to be completed under the PDI activities for HB-4. Therefore, several tasks related to the Bog and Gabion Wall investigations completed under SSS-4 are discussed in this PDI summary for HB-4 (test pits, sediment evaluations, and slope stability evaluations).

The locations of the explorations discussed in this PDI are presented in Figure HB4-1, Exploration Location Plan.

2.1 HOLDING BASIN BORINGS

Boring installation was described in *Appendix A – HB-1 PDI Summary Report* (PDI HB-1). Work described under HB-1 that generated data used for PDI activities completed as part of HB-4 included:

- Drilling of six (6) investigation borings and installation of continuous multi-level tubes (CMTs) within the six (6) completed boreholes;
- Installation of four (4) observation wells;
- Completion of a series of laboratory tests to evaluate soil and bedrock conditions;
- Drilling of six (6) boreholes for two (2) transects of cross-hole seismic testing; and
- Collection of borehole geophysics data from eight (8) of the drilled boreholes (a combination of the locations completed for CMTs and center location of each of the cross-hole seismic testing transects).

Sampling procedures and American Society for Testing and Materials (ASTM) standards used to perform these borings are included in the HB Summary Report. Exploration locations are shown on Figure 1 of the *HB Summary Report* and Figure HB4-1 attached to this report.

Relevant data can be found in the following attachments to *Appendix A – HB-1 PDI Summary Report*:

- Table HB4-1: A summary of the boring locations, depths drilled, general stratification and observed water levels;
- Table HB1-4: A summary of the analytical laboratory testing performed on the rock cores; and
- Exhibit HB1-6: The results of grain size analyses which were used during estimation of strength parameters from published correlations between material type and corrected N-values.

A summary of historical borings, completed prior to this PDI work and used in slope stability analyses is shown as Table HB4-2.

2.2 HAND PROBES AND HAND AUGERS

2.2.1 Sphagnum Bog

Seven (7) transects (HP-1, HP-4, HP-5, HP-6, HP-7, HP-8, and HP-9) were established along the southern and western edges of the Sphagnum Bog to determine the peat thickness and obtain samples for visual classification and geotechnical laboratory testing.

Prior to probing and sampling at Sphagnum Bog, each proposed location was staked and reviewed for access and general field conditions. Due to the sensitive nature of the Sphagnum Bog material, wooden planks were used as temporary walkways and platforms at the sampling locations to spread contact pressure from foot traffic and to provide a path above standing water where present.

A total of 15 shallow hand probes were performed using solid metal probing rods to measure the peat thickness along transects within the Sphagnum Bog. The probes were advanced to depths ranging between 4 feet (ft) and 11 ft below ground surface (bgs) terminating at depths where either the field personnel could no longer advance the probe, or the top of the underlying sand material was encountered.

Hand augers were subsequently advanced at each probe location to depths ranging between 4 ft and 7 ft bgs. A total of 27 bulk samples of the peat material were obtained for visual classification. Eleven (11) samples were submitted for laboratory organic content testing, mechanical grain size analysis, and hydrometer testing to characterize the peat and underlying sand strata identified in the hand probes.

The transect locations are shown in Figure HB4-1 with hand probes designated by "HP." Subsurface conditions encountered at the hand probe locations are summarized in Table HB4-3. Descriptions of the samples obtained from the hand augers and laboratory test results are provided in Tables HB4-3 and Exhibit HB4-1, respectively.

2.2.2 Slopes

In addition to the seven (7) transects established in the Sphagnum Bog, a total of eight (8) slope transects were established. Two (2) slope transects (TS-1 and TS-2) are located along the western slope of the Sphagnum Bog and six (TS-3 through TS-8) are around the Cooling Pond (including two downslope of the Gabion Walls at the northern end of the pond). Two to three hand augers were performed at each transect to assess the depth of the topsoil and root mat and obtain samples of underlying natural sand deposits.

A total of 22 hand auger explorations associated with these slope transects were advanced to depths ranging from approximately 1 to 5 ft bgs. A total of 40 samples were obtained from the hand augers. Three (3) samples were submitted for organic content testing and 12 samples were submitted for mechanical grain size analysis/ hydrometer testing.

The slope transects and sampling locations are shown in Figure HB4-1, Exploration Location Plan with the identifier "HP." A summary of hand probe depths and observed peat thicknesses from transect samples collected in the Sphagnum Bog are summarized as Table HB4-3. Subsurface conditions encountered at the transects are summarized in Table HB4-4. Descriptions of the samples obtained from the hand augers and results of laboratory testing are provided in Table HB4-4 and Exhibit HB4-1, respectively. Long term slope stability analysis is discussed in Section 5.1 and locations are shown in Figure HB4-2.

2.3 GABION WALLS

Existing Gabion Walls are located on the north and south sides of the roadway leading to the Northern Parking Lot, as shown on Figure 1 of the *HB Summary Report*. The northern Gabion Wall is located on the upper portion of the southeastern slope leading into the Northern Wetland, and the southern Gabion Wall is on the upper portion of the slope at the northern and northwestern edges of the Cooling Pond. Test pits and aerial survey of the Gabion Walls were performed to evaluate the configuration of the gabion baskets that make up the wall and are summarized below.

2.3.1 Test Pits

Three (3) test pits (HA21-TP-104, HA21-TP-108, and HA21-TP-109) were performed behind the existing Gabion Walls to confirm the configuration of the Gabion Wall as identified in historical design drawings. Gabion Wall test pit locations are shown as Figure HB4-3.

The test pits were performed using a track-mounted excavator and were approximately 6 ft wide and 13 to 18 ft long, parallel to the wall alignment, with depths varying between 6 and 9 ft. The test pits were advanced to depths sufficient to expose the top of the third row of rock-filled gabion baskets. Following completion of the test pits, the excavated soil was placed and compacted back into the excavations. Refer to Exhibit HB4-2 for the field logs, sketches, and photos of the test pits.

2.3.2 Gabion Wall Aerial Survey

An aerial drone survey of the southern Gabion Wall was performed by Comprehensive Environmental, Inc. (CEI) in November 2020 to evaluate plumbness (vertical orientation) along the Gabion Wall faces to establish a baseline for future observations. The aerial survey included a topographic survey made using a DJI M201 drone and post-processing imagery outputs including a fly-through video, a 3-dimensional surface model and an orthophoto mosaic aerial image. These images and surveys will be used to compare future visual observations of the southern Gabion Wall and monitor translative and rotative movement.

3 Deviations from Work Plan

Bog transects HP-2 and HP-3, planned for the toe of the Landfill in the Sphagnum Bog, were not completed due to accessibility issues as the transects were located in standing water at the time of sampling.

An additional test pit was completed as part of the Gabion Wall investigation.

Proposed field vane shear testing to measure the shear strength of peat in the Sphagnum Bog was not conducted. The apparent strength of the material was above the applicable range of testing equipment, likely due to the fibrous nature and relatively high sand content of the material.

4 Results

4.1 SUBSURFACE CONDITIONS

4.1.1 Test Borings

The test borings revealed the following strata, with generalized descriptions below in order of increasing depth below ground surface. Strata thicknesses are summarized on Table HB4-1. Refer to Exhibit HB-1 of *Appendix A – HB-1 PDI Summary Report* (PDI HB-1) for the boring logs and Exhibit HB-6 of PDI HB-1 for results of laboratory grain size analyses.

Approximate Range in Thickness, feet	Generalized Description
2 to 22	FILL - Very loose to medium dense, brown, silty SAND (SM).
44 to 68	ICE CONTACT DEPOSITS – Very loose to very dense, poorly-graded SAND (SP), well-graded SAND (SW), silty SAND (SM), poorly-graded GRAVEL with Silt (GP-GM), and sandy SILT (ML).
1.5 to 37	FLOW/GLACIAL TILL – Medium Dense to very dense poorly-graded SAND with silt and gravel (SP-SM), poorly-graded SAND with clay and gravel (SP-SC), silty SAND with gravel (SM), clayey SAND with gravel (SC), and poorly-graded GRAVEL with silt and sand (GP-GM).
---	BEDROCK – Moderately hard to very hard, fresh, fine to very coarse grained ASSABET QUARTZ DIORITE with very hard, fresh, medium to very coarse grained ACTON/ ANDOVER GRANITE. The top of bedrock was encountered at depths of 72 to 105 ft bgs.

4.1.2 Hand Probes on Slopes

The hand probes performed along slope stability transects established the thickness of topsoil or root mat layers along the slope and identified the top of the underlying sand layers. The topsoil and root mats ranged in thicknesses from 0 to 2.0 ft with the thickest root mats typically near the crest of the slope. Natural sand deposits were encountered immediately below the topsoil/root mat layers, with hand auger refusals at depths ranging from 1.0 to 5.0 ft bgs. Cobbles and coarse gravel were observed in the natural sand deposits.

The grain size analyses on the samples submitted from these transects classified the surficial topsoil/root mat materials as clayey SAND (SC), silty SAND (SM) and poorly graded SAND with silt and gravel (SP-SM) with an organic content ranging between 2.1 and 4.3%. The surficial strata of the slope transects are summarized in Table HB4-4**.**

4.2 HAND PROBES IN SPHAGNUM BOG

In the Sphagnum Bog, preliminary probes were first advanced into the peat material to establish the depth of the bottom of the peat which ranged in depth of 4 ft to greater than 11 ft (probe length). Grain size analyses on samples collected from the Sphagnum Bog classified the materials as sandy SILT (ML) and silty SAND with organics (SM), and organic contents were measured to range between 3.8 and 97.2%. Generally, the material grain size decreased and organic content increased with distance into the Sphagnum Bog from the edge (sampling locations B and C). Peat thicknesses and general descriptions along the bog transects are outlined in Table HB4-3**.**

4.3 GABION WALL EVALUATION

4.3.1 Test Pits

The Gabion Wall test pit locations are shown as Figure HB4-3. The Gabion Walls had a width of 3 ft (measured perpendicular to the wall face) at the ground surface and a varying width of 7.5 to 8 ft at the bottom of the excavations. Test pits were discontinued at the top of the third row of baskets. Information regarding the height of the third row of baskets and dimensions of underlying baskets was not obtained from the test pits. The baskets were filled with crushed rock fill and were separated from the backfill with a geotextile filter. Backfill materials behind the gabion baskets generally consisted of a 1 to 1.5 ft thickness of topsoil or pavement sections overlying processed fill consisting of poorly graded SAND (SP) with silt and gravel. Test pit logs and available photographs are included in Exhibit HB4-2.

HA21-TP-104 was completed behind the northern Gabion Wall at the top of the slope into the Northern Wetland. Three (3) rows of gabion baskets were observed. The top row was approximately 3 ft wide by 4 ft tall. The second row was approximately 6 ft wide by 3 ft tall. The third row was approximately 8 ft wide. Excavation was terminated at the top of the third row of baskets. The above-ground height of the face of the wall could not be accurately measured due to organic debris covering the face of the wall. The backfill material had been placed to within 0.8 ft below the top of the gabion wall.

HA21-TP-108 was completed on the western leg of the Gabion Wall at the top of the Cooling Pond slope. Three (3) rows of gabion baskets were observed. The top row was approximately 3 ft wide by 3 ft tall. The second row was approximately 5.5 ft wide by 3.5 ft tall. The third row was approximately 8 ft wide. Excavation was terminated at the top of the third row of baskets. The above-ground height of the face of the wall could not be accurately measured due to organic debris covering the face of the wall. The backfill material had been placed to within 0.5 ft below the top of the Gabion Wall.

HA21-TP-109 was completed on the northern leg of the Gabion Wall at the top of the Cooling Pond slope. Three (3) rows of gabion baskets were observed. The top row was approximately 3 ft wide by 2 ft tall. The second row was approximately 4.5 ft wide by an estimated[1] 3.5 ft tall. The third row was approximately 7.5 ft wide. Excavation was terminated at the top of the third row of baskets. The above-ground height of the face of the

[1] Test pit logs indicate a 7-ft-tall basket. However, based on records assessment and a further assessment of the gabion conditions, it is estimated the basket is approximately 3.5 ft tall.

wall was approximately 15 ft and the backfill material had been placed to within 0.8 ft of the top below the Gabion Wall.

4.3.2 Plumbness

Observations at the Gabion Wall test pits indicated the baskets appeared to be generally intact and the crushed rock fill was contained within the gabion baskets.

The aerial survey from the drone did not indicate a reverse batter of the Gabion Wall in the sections in which the drone could survey. However, the easternmost section of the southern Gabion Wall (nearest HA21-TP-109) visibly leans (reversed batter angle) towards the Cooling Pond; this section could not be surveyed by the drone due to tree cover and will continue to be visually monitored. The drone survey conducted provides a baseline survey of the toe of the wall and the top of the wall that is not obstructed by trees. A subsequent survey can be conducted in approximately one year to evaluate if the wall has moved since completion of the baseline survey.

4.4 SLOPE STABILITY

4.4.1 Shear Strength Parameters

Total and effective shear strength parameters proposed for use in slope stability analyses were established for the Fill (from Holding Basin borings included with HB-1), Ice-Contact Deposits, and Glacial Till from correlations based on the corrected Standard Penetration Test N-Values, material types, and observed conditions at the site.

Given the variety of the N-values in each major stratum and the high efficiency of the hammer, strength parameters were generically assigned to layers with similar densities and consistencies as observed in the field explorations. The parameters of non-organic subsurface materials used in stability analyses were developed using correlations to the lower bound N-values associated with the density and consistency designations:

- Unit weights are based on the relative density and unit weight correlation as presented in An Engineering Manual for Settlement Studies (Duncan and Buchignani, 1976),
- Angles of internal friction are based on the empirical correlation between friction angle of sands and normalized standard penetration blowcount as presented in Soil Mechanics in Engineering Practice (Terzaghi, et.al, 1996), and
- Undrained shear strengths are based on the Relationship between the corrected blowcount and undrained shear strength at presented in Introductory Soil Mechanics and Foundations: Geotechnical Engineering (Sowers, 1979).

The parameters of organic subsurface materials (i.e. peat) used in stability analyses were developed using sources including:

- Kazemian, et. al. (2011), "A state of art review of peat: Geotechnical engineering perspective." International Journal of the Physical Sciences, Vol. 6(8) pp. 1974-1981.
- Rahgozar and Saberian (2016), "Geotechnical properties of peat soil stabilised with shredded waste tyre chips." Mires and Peat, Vol. 18, Article 03.
- Zainorabidin and Mansor (2016), "Investigation on the shear strength characteristic at Malayan Peat." ARPN Journal of Engineering and Applied Sciences. Vol. 11 No. 3.

Shear strength parameters to be used in the drained (long-term) slope stability analyses use the Mohr-Coulomb strength parameters of angle of internal friction, pounds per cubic foot (pcf), “phi,” cohesion “c” and pounds per square foot (psf) are shown below.

Material Type	Moist Unit Weight [Saturated] (pcf)	Phi (degrees)	Cohesion above water [below water] (psf)
Very Loose Existing Fill	100 [107]	24	50 [0]
Loose Existing Fill	108 [115]	28	50 [0]
Medium Dense Existing Fill	115 [122]	30	50 [0]
Dense Existing Fill	122 [129]	32	50 [0]
Very Dense Existing Fill	130 [137]	34	50 [0]
Very Loose Sand	95 [102]	24	50 [0]
Loose Sand	105 [112]	28	50 [0]
Medium Dense Sand	115 [122]	32	50 [0]
Dense Sand	122 [129]	34	50 [0]
Very Dense Sand	130 [137]	36	50 [0]
Glacial Till	135 [142]	40	0 [0]
Loose Silt	105 [112]	28	50 [0]
Medium Dense Silt	115 [122]	30	50 [0]
Dense Silt	122 [129]	32	50 [0]
Soft Peat	85 [92]	16	250 [0]
Vegetative Peat	85 [92]	20	250 [0]
Fibrous Peat	85 [92]	27	250 [0]
Vegetated Ground Surface	110 [117]	28	250 [0]
Landfill Waste	87 [87]	28	250 [0]
Gabion Wall	150 [150]	Modeled as a Rigid Structure – Infinite Strength	

For undrained (short-term) slope stability analyses the coarse-grained materials (such as sands and gravels) are assigned the Mohr- Coulomb strength parameters, as shown above, and the fine-grained materials (such as silts and peats) are assigned an undrained shear strength, as shown below.

Material Type	Moist Unit Weight [Saturated] (pcf)	Undrained Shear Strength (psf)
Loose Silt	105 [112]	500
Medium Dense Silt	115 [122]	1000
Dense Silt	122 [129]	1500
Soft Peat	85 [92]	500
Vegetative Peat	85 [92]	500
Fibrous Peat	85 [92]	500

The strength properties shown above are preliminary based on our initial assessment of subsurface conditions at the site and may be adjusted during design as our analyses are refined.

5 Summary of Future Design Considerations

5.1 LONG-TERM SLOPE STABILITY

As designated in the Record of Decision (ROD), the planned remediation for the HB involves the installation of a containment wall, filling the basin, and capping the filled area. The HB closure and containment wall designs should include an evaluation of long-term slope stability. Slope stability will be evaluated using Slide2 (RocScience, 2020). Slide2 is a computer program that analyzes two dimensional models using slice limit equilibrium methods. Spencer's Method of Slices, which analyzes both force and moment equilibrium, will be used in these analyses. The non-circular autorefine search method and surface optimization will be used to evaluate failure surfaces. The minimum required factor of safety for the long-term closed condition will be 1.5.

Long-term slope stability analyses will include an assessment of post-mitigation conditions at the Gabion Wall at the northern end of the Cooling Pond as well as measures required to achieve the minimum required factor of safety (which may include regrading to the north of the wall and removing upper courses of gabion baskets).

Long-term slope stability analyses will be performed at the locations shown on Figure HB4-2. The slope stability output from an example analysis performed across the HB (at Section HB-D) is shown in Exhibit HB4-3.

Our assessment of long-term slope stability will be for static conditions only. Slope stability for pseudo-static loading under the design earthquake is a short-term loading condition that will be assessed as described in Section 5.2.

5.2 SHORT-TERM SLOPE STABILITY

Mitigation measures at the site will include removing impacted soils in the Sphagnum Bog near the toes of slopes adjacent to the HB and landfill. While the ROD identifies a 3 ft excavation in the Sphagnum Bog, data obtained during the SSS-4 PDI activities will be used to refine excavation limits, with additional consideration given to protecting the Sphagnum Bog area. Impacted soils will also be removed from the Cooling Pond, extending to the toes of slopes adjacent to the edges of the pond. It is anticipated that excavation at the slope toes will be laid back at an angle similar to the existing slope angles (i.e. vertical cuts are not planned at the slope toes).

Short-term slope stability analyses will be performed using the method described above for long-term stability to evaluate impact of proposed excavation on the factor of safety. In many cases the existing natural slopes are relatively steep and will not meet typical safety factors for designed slopes. The intention of the short-term stability analyses is to confirm that planned excavation will not result in significant reduction in safety factor compared to existing conditions and to identify areas where special measures (such as sequencing excavations to be cut and backfilled in short lengths along slope toes) may be required.

Short-term stability analyses will also be performed to evaluate temporary stability of slopes adjacent to the HB extending to the Sphagnum Bog and Cooling Pond under anticipated construction surcharge loading from equipment associated with the containment wall installation. A target minimum factor of safety under temporary construction surcharge of 1.2 is planned for slopes adjacent to the HB.

Short-term stability analyses will also assess pseudo-static loading under the design earthquake. This condition will use undrained soil properties which are appropriate for this short-term loading condition. A target minimum factor of safety under pseudo-static loading of 1.0 is planned.

5.3 GABION WALL NORTH OF COOLING POND

Removal of impacted soils at the Cooling Pond will require excavation of soils downslope from the toe of the existing Gabion Wall at the northern end of the pond. Temporary global stability of the wall will be evaluated for conditions anticipated during excavation. As noted above, removal of upper courses of gabion baskets may be required to achieve the target safety factor.

Visual observation indicates that the Gabion Wall appears to be leaning outward in some locations, compared to drawings indicating the wall face was designed to be battered away from the slope. To help understand potential concerns with stability of the existing wall, additional survey monitoring is recommended for comparison with recent data to help determine if wall movement is continual. Portions of the wall face could not be observed during the recent survey due to the presence of vegetative growth. Clearing of vegetation, from the face of the wall, is also recommended to allow for a more detailed survey of the wall.

ATTACHMENTS

TABLES

Table HB4-1 – Summary of Geotechnical Borings
Table HB4-2 – Summary of Historical Borings Used in Stability Analyses
Table HB4-3 – Summary of Hand Probes along the Sphagnum Bog Transects
Table HB4-4 – Summary of Hand Probes along the Slope Stability Transects

FIGURES

Figure HB4-1 – Exploration Location Plan
Figure HB4-2 – Global Stability Cross Sections
Figure HB4-3 – Gabion Wall Test Pit Locations

EXHIBITS

Exhibit HB4-1 – Geotechnical Analytical Laboratory Testing Results
Exhibit HB4-2 – Test Pit Logs, Available Test Pit Photos and Gabion Wall Photos
Exhibit HB4-3 – Example of Selected Slope Stability Analysis

HB4 TABLES

TABLE HB4-1
SUMMARY OF GEOTECHNICAL BORINGS
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Boring ID	Area	Boring Type	Ground Surface El. (ft[1])	Total Depth (ft)	Northing[2]	Easting[2]	Thickness of Strata (ft)				Water Level (ft)	
							Fill	Ice Contact Deposits	Flow/ Glacial Till	Bedrock	Depth (ft)	El. (ft)
HA20-CMT-1	Holding Basin Embanmkments	Standard Penetration Test (Sonic Rig with 6" Casing)	176.5	94.8	2985714.9	677779.4	10	50	12	>22.8	14	162.5
HA20-CMT-2			186.0	136.3	2985761.0	677654.1	22	44	19.5	>50.8	48	138.0
HA20-CMT-3			181.2	147.0	2985854.5	677667.3	14	62	20.5	>84.7	50	131.2
HA20-CMT-4			175.0	114.0	2985928.9	677778.4	14	60	14	>26	32	143.0
HA20-CMT-5			173.3	130.4	2985879.1	677817.9	2	68	7.8	>52.6	38	135.3
HA20-CMT-6			177.0	126.8	2985799.7	677817.5	16	59	1.5	>50.3	6	171.0
HA20-GP-101	Holding Basin Embankments	Standard Penetration Test (Sonic Rig with 6" Casing)	186.0	152.0	2985696.0	677726.4	2	65	37	>50	>14	<172
HA20-GP-102			187.0	152.0	2985700.7	677715.8	2	64	36	>50	40	147.0
HA20-GP-103			187.5	142.0	2985705.7	677705.8	See Note 4			>50	See Note 4	
HA20-GP-104			184.0	155.0	2985885.0	677685.1	See Note 4			>50	See Note 4	
HA20-GP-105			185.0	155.0	2985896.7	677687.6	12	66	27	>50	34	151.0
HA20-GP-106			185.0	155.0	2985908.7	677690.3	See Note 4			>50	See Note 4	

NOTES:
1.Elevation is based on the National Geodetic Vertical Datum (NGVD 1929).
2. HA20-CMT: Boring abandoned with Continuous Multichannel Tubing for groundwater monitoring.
3. HA20-GP: Boring advanced for downhole geophysics observation for seismic evaluation.
4. The sonic casing was advanced to the top of bedrock; general thicknesses of the Fill, Ice Contact Deposits, and Flow/Glacial Till are 92-ft, 105-ft, and 105-ft, respectively.

TABLE HB4-2
SUMMARY OF HISTORICAL BORINGS USED IN STABILITY ANALYSES
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Boring ID	Area	Ground Surface El. (ft[1])	Total Depth (ft)	Northing[2]	Easting[2]		Thickness of Strata (ft)			
							Fill	Ice Contact Deposits	Flow/ Glacial Till	Bedrock
HB-11	Sphagnum Bog	170.8	42.0	2985934.4	677821.8		0	>42	N.E.	N.E.
MW-BS17	Cooling Pond	189.6	113.0	2986373.9	677556.9		0	96.6	4.4	>12
MW-S07	Cooling Pond	190.8	105.0	2986198.6	677613.8		0	93	10	>2
MW-S16	Cooling Pond	187.8	84.5	2985989.7	677613.3		0	<84.5	N.E.	N.E.
MW-S18	Sphagnum Bog	155.6	29.5	2985812.0	677890.8		0	<29.5	N.E.	N.E.
MW-S19	Landfill	185.3	65.5	2985562.9	678066.2		0	<65.5	N.E.	N.E.
MWS20	Landfill	154.4	46.8	2985836.5	678090.3		0	<46.8	N.E.	N.E.

NOTES:
1.Elevation is based on the National Geodetic Vertical Datum (NGVD 1929).
2. BGS: Ground Surface
3. Historical Borings were performed by other consultants from which generalized stratification was identified.
4. Strength data and water level data were not included in the historical boring databases.

TABLE HB4-3
SUMMARY OF HAND PROBES ALONG THE SPHAGNUM PEAT BOG TRANSECTS
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Transect	Sample Location	Date Sampled	Samples Obtained	Total Depth of Hand Probe (ft)	Observed Thickness of Peat (ft)	Top of Sand (BGS)
1	HP-1-A	9/29/2020	3	4.5	± 4	4
	HP-1-B	9/29/2020	2	6	± 6	6.5
	HP-1-C	9/29/2020	1	8	± 8	8.5
4	HP-4-A	9/29/2020	3	6	± 4	4
	HP-4-B	9/29/2020	2	10	± 10	10
	HP-4-C	9/29/2020	1	11	± 11	11
5	HP-5-A	9/28/2020	2	4	± 1-2	2
	HP-5-B	9/28/2020	2	10	± 10	10
	HP-5-C	9/28/2020	1	10	>10	N.E.
6	HP-6-A	9/28/2020	3	4.5	± 3.5	4
	HP-6-B	9/28/2020	(No recovery)	11	± 11	11
7	HP-7-A	10/6/2020	2	5.5	5.5	5
	HP-7-B	10/6/2020	(No recovery)	6	± 6	6
8	HP-8-A	10/6/2020	3	7	± 6	6
	HP-8-B	10/6/2020	(No recovery)	8	± 8	8
	HP-8-C	10/6/2020	2	10	> 10	N.E.
9	HP-9-A	10/7/2020	4	6.5	± 5.5	6
	HP-9-B	10/7/2020	2	6.5	± 6.5	6.5

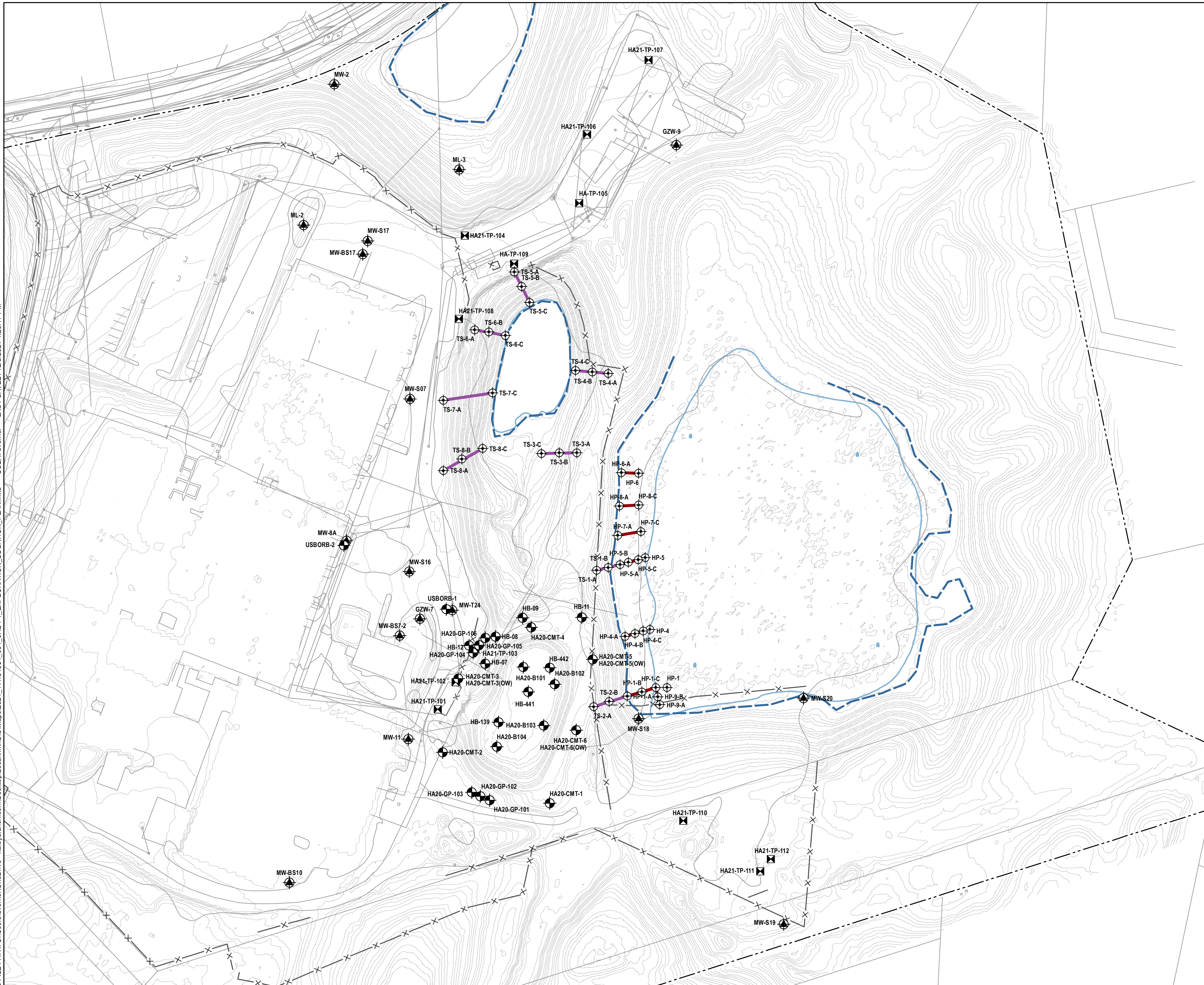
NOTES:
1. BGS: Ground Surface
2. Hand probes were performed using a hand auger and tell-tale probing rods.
3. If sand was not encounted within ten or eleven feet below the ground surface the investigation was terminated.

TABLE HB4-4
SUMMARY OF HAND PROBES ALONG THE SLOPE STABILITY TRANSECTS
NUCLEAR METALS INC.
CONCORD, MASSACHUSETTS
FILE NO. 131884

Transect	Sample Location	Date Sampled	Samples Obtained	Total Depth of Hand Probe (ft)	Observed Thickness of Topsoil/Root Mat (ft)	Top of Medium Dense Sand (BGS)
1	**TS-1-A**	9/30/2020	3	3.7	1.0	3.7
	TS-1-B	9/30/2020	3	5.1	0.0	5.1
2	**TS-2-A**	10/1/2020	2	3.0	1.0	3.0
	TS-2-B	10/1/2020	3	4.0	1.0	4.0
3	**TS-3-A**	9/30/2020	0	See Note 3		
	TS-3-B	9/30/2020	2	2.0	0.5	2.0
	TS-3-C	9/30/2020	3	5.0	0.0	5.0
4	**TS-4-A**	10/1/2020	1	1.0	0.3	1.0
	TS-4-B	10/2/2020	1	1.0	1.0	1.0
	TS-4-C	10/2/2020	2	4.0	2.0	4.0
5	**TS-5-A**	10/2/2020	2	3.0	2.0	3.0
	TS-5-B	10/2/2020	1	1.8	1.8	1.8
	TS-5-C	10/2/2020	1	2.0	0.0	2.0
6	**TS-6-A**	10/2/2020	2	3.5	2.0	3.5
	TS-6-B	10/2/2020	2	3.0	2.0	3.0
	TS-6-C	10/2/2020	3	4.0	1.6	4.0
7	**TS-7-A**	10/2/2020	2	3.0	1.0	3.0
	TS-7-B	10/2/2020	1	See Note 4		
	TS-7-C	10/2/2020	1	1.0	0.0	1.0
8	**TS-8-A**	10/5/2020	2	3.0	0.0	3.0
	TS-8-B	10/5/2021	1	2.0	0.0	2.0
	TS-8-C	10/5/2022	2	4.0	0.0	4.0

Notes:
1. BGS: Ground Surface
2. Hand probes were performed using a hand auger and tell-tale probing rods.
3. Hand auger hole collapsed during first auger probe; exact depth of the loose sand could not be determined.
4. Hand auger encountered a cobble within one foot of the ground surface; except depth of the root mat could not be determined.
5. Investigation was terminated if cobbles were encountered within four feet of the ground surface.

HB4 FIGURES



LEGEND

- HAND PROBE
- SOIL BORING
- MONITORING WELL
- TEST PIT
- SLOPE TRANSECT
- BOG TRANSECT
- WETLAND
- FENCE
- OPEN WATER
- SITE BOUNDARY
- BASE PLAN FEATURE
- TOPOGRAPHIC CONTOUR, 2-FT INTERVAL
- FORMER BUILDING SLAB

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. FT = FEET
3. BASE MAP SOURCE: ESRI

HALEY ALDRICH

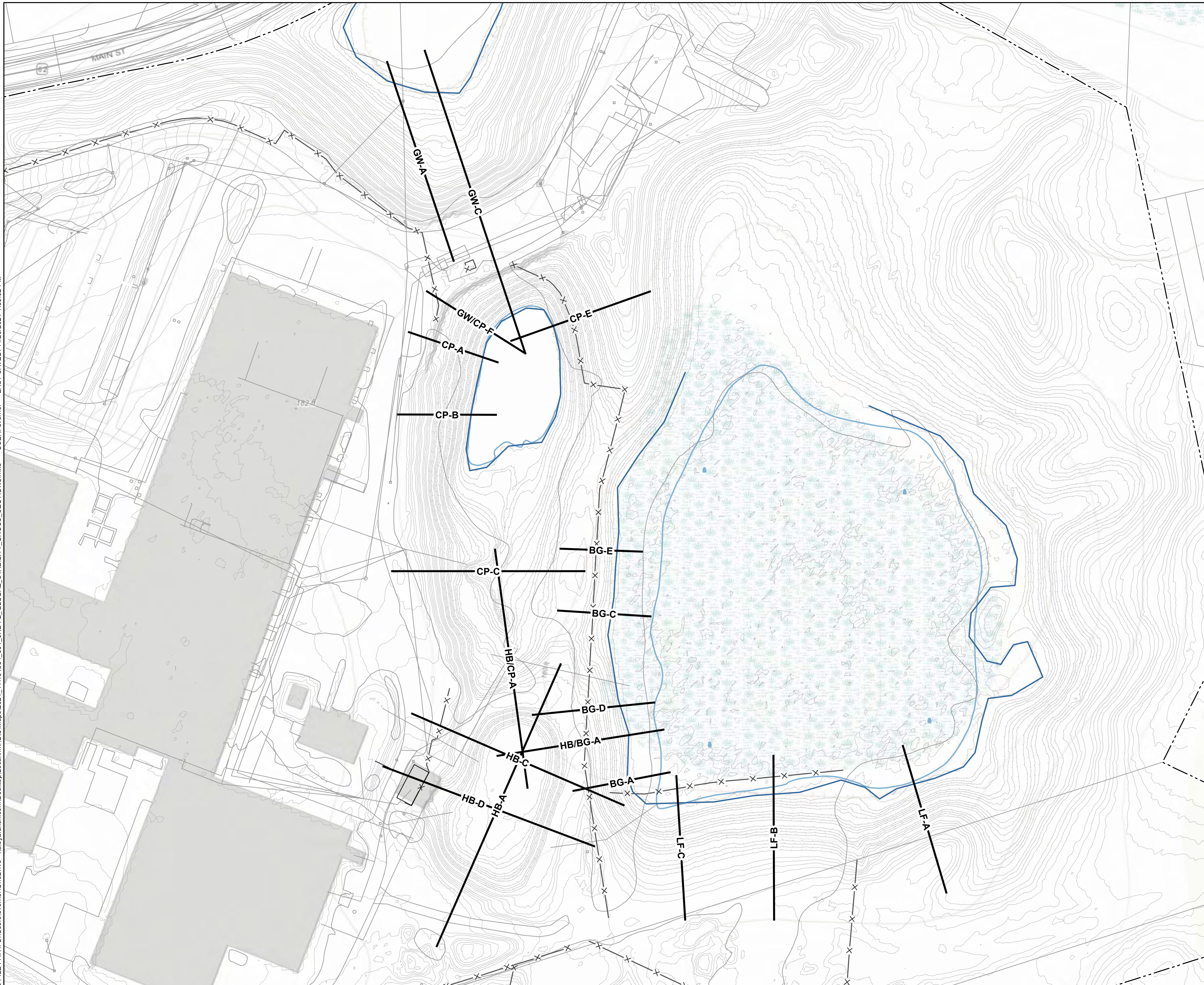
NUCLEAR METALS, INC.
2229 MAIN STREET
CONCORD, MASSACHUSETTS

EXPLORATION LOCATION PLAN

DECEMBER 2021

FIGURE HB4-1

GIS FILE PATH: C:\Users\dverrier\OneDrive - haleyaldrich.com\Desktop\Local\nmi\GIS\Maps\2021_11\131884_004_0HB4-1_EXPLORATION_LOCATION_PLAN.mxd — USER: dverrier — LAST SAVED: 12/3/2021 4:25:17 PM



LEGEND

- GEO-SECTION CROSS SECTION
- WETLAND
- PUMP STATION FOOTPRINT
- FENCE
- OPEN WATER
- SITE BOUNDARY
- BASE PLAN FEATURE
- TOPOGRAPHIC CONTOUR, 2-FT INTERVAL
- FORMER BUILDING SLAB

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP SOURCE: ESRI

N

0 100 200
SCALE IN FEET

HALEY ALDRICH

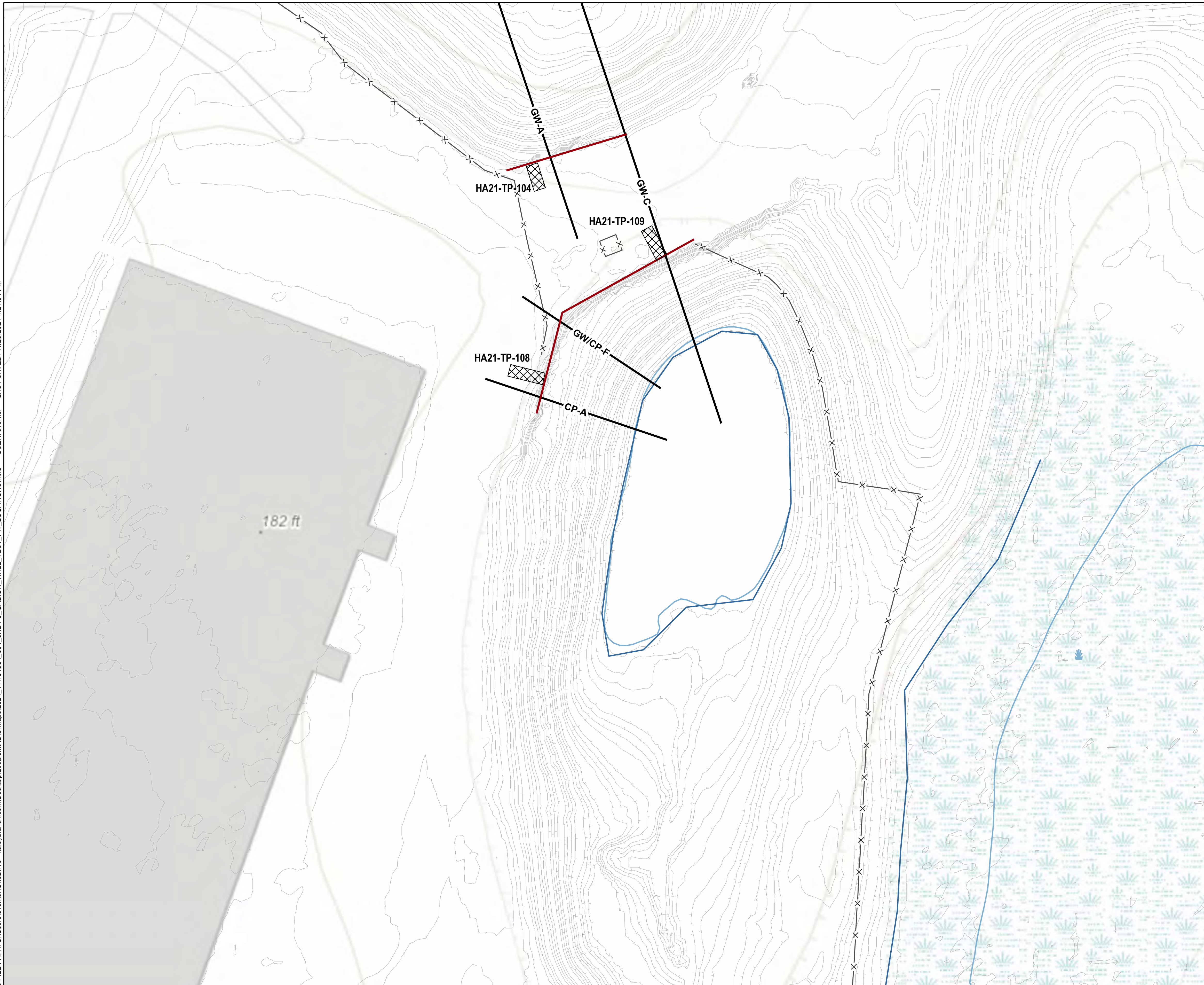
NUCLEAR METALS, INC.
2229 MAIN STREET
CONCORD, MASSACHUSETTS

GLOBAL STABILITY CROSS SECTIONS

DECEMBER 2021

FIGURE HB4-2

GIS FILE PATH: C:\Users\dverrier\OneDrive - haleyaldrich.com\Desktop\Local\nmi\GIS\Maps\2021_11\131884_004_0HB4-2_GLOBAL_STABILITY_CROSS_SECTIONS.mxd — USER: dverrier — LAST SAVED: 11/29/2021 1:33:02 PM



LEGEND

- GABION WALL
- CROSS SECTION
- FENCE
- OPEN WATER
- WETLAND
- TOPOGRAPHIC CONTOUR, 2-FT INTERVAL
- TEST PIT
- FORMER BUILDING SLAB

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE. TEST PIT EXPLORATIONS WERE COMPLETED AS 6-FT WIDE TRENCHES RANGING IN LENGTH FROM 16.5 FT TO 18 FT. TEST PIT DEPTHS RANGE FROM 6 TO 9 FT.
2. FT = FEET
3. BASE MAP SOURCE: ESRI

N

0 50 100
SCALE IN FEET

HALEY ALDRICH

NUCLEAR METALS, INC.
2229 MAIN STREET
CONCORD, MASSACHUSETTS

GABION WALL
TEST PIT LOCATIONS

DECEMBER 2021

FIGURE HB4-3

GIS FILE PATH: C:\Users\dverrier\OneDrive - haleyaldrich.com\Desktop\Local\nmi\GIS\Maps\2021_11\131884_004_0HB4-3_GABION_WALL_TEST_PIT_LOCATIONS.mxd — USER: dverrier — LAST SAVED: 11/29/2021 1:21:01 PM

EXHIBIT HB4-1

Geotechnical Analytical Laboratory Testing Results

GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	---	Tested By:	cam
Sample ID:	---	Test Date:	10/26/20	Checked By:	bfs
Depth :	---	Test Id:	585969		

Moisture, Ash, and Organic Matter - ASTM D2974

Boring ID	Sample ID	Depth	Description	Moisture Content, %	Ash Content, %	Organic Matter, %
---	HP-1-A_4-4.5	4-4.5 bgs	Moist, dark brown silty sand	40	95.1	4.9
---	HP-4-A_4-6	4-6 bgs	Moist, very dark brown silty sand with organics	46	93.8	6.2
---	HP-4-C_0-4	0-4 bgs	Moist, dark brown sandy silt with organics	1120	5.8	94.2
---	HP-5-B_2-4	2-4 bgs	Moist, very dark brown silt with sand and organics	980	8.3	91.7
---	HP-6-A_0-2	0-2 bgs	Moist, black silty sand with organics	126	78.8	21.2
---	HP-6-A_2-3.5	2-3.5 bgs	Moist, very dark brown silty sand with organics	247	67.8	32.2
---	HP-6-A_3.5-4.5	3.5-4.5 bgs	Moist, dark brown silty sand	49	96.2	3.8

Notes: Moisture content determined by Method A and reported as a percentage of oven-dried mass; dried to a constant mass at temperature of 105º C
Ash content and organic matter determined by Method C; dried to constant mass at temperature 440º C

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Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	---	Tested By:	cam
Sample ID:	---	Test Date:	10/26/20	Checked By:	bfs
Depth :	---	Test Id:	585966		

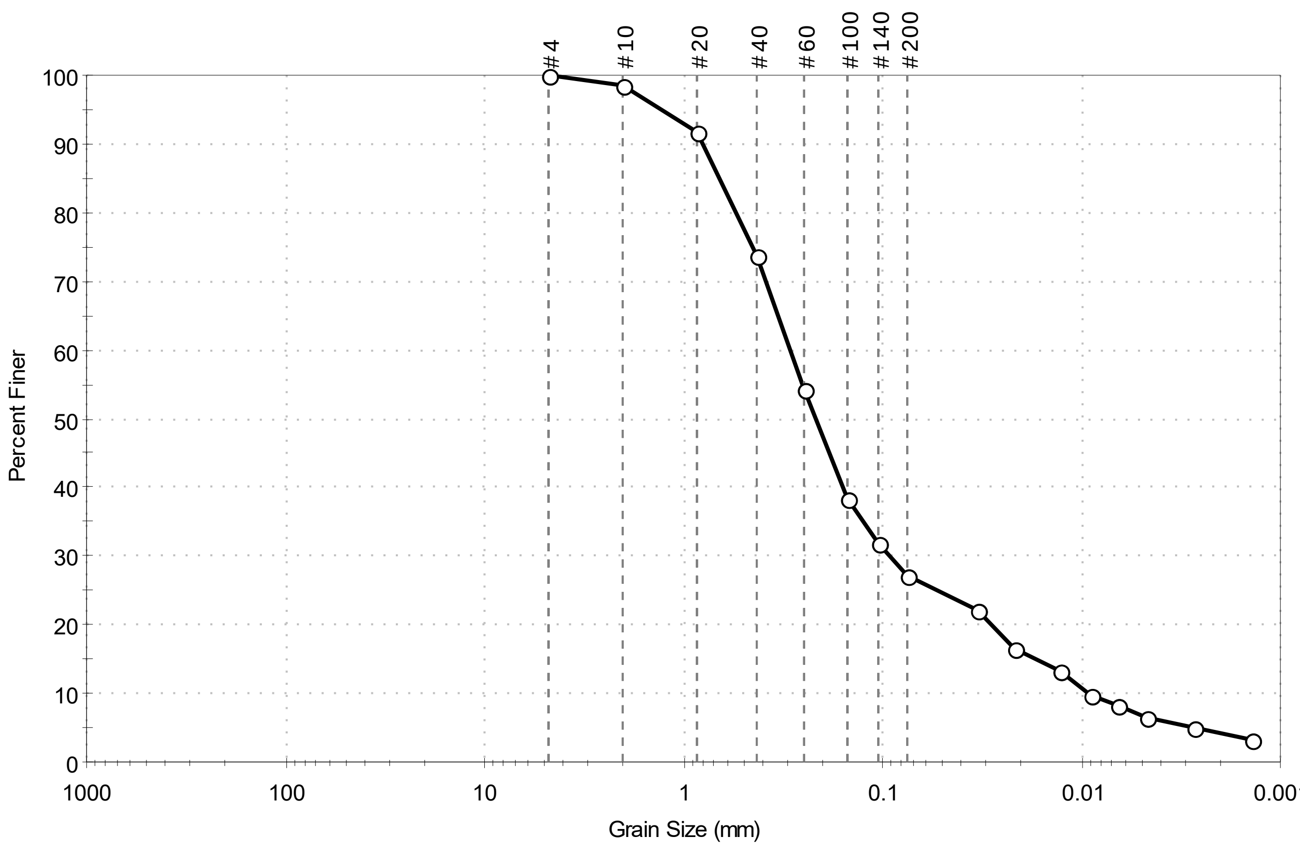
Moisture, Ash, and Organic Matter - ASTM D2974

Boring ID	Sample ID	Depth	Description	Moisture Content, %	Ash Content, %	Organic Matter, %
---	HP-7-C_4-6	4-6 bgs	Moist, very dark brown silt with sand and organics	819	2.8	97.2
---	HP-8-A_0-4	0-4 bgs	Moist, very dark brown sandy silt with organics	183	70.0	30.0
---	HP-9-A_2-4	2-4 bgs	Moist, very dark brown silt with sand and organics	518	28.8	71.2
---	HP-9-A_5.5-6.5	5.5-6.5 bgs	Moist, very dark brown silty sand with organics	41	93.1	6.9
---	TS-1-A_0-1	0-1 bgs	Moist, brown clayey sand	6	95.7	4.3
---	TS-6-A_0-2	0-2 bgs	Moist, brown silty sand with gravel	6	97.5	2.5
---	TS-6-C_0-1.6	0-1.6 bgs	Moist, dark olive brown clayey sand with gravel	20	97.9	2.1

Notes: Moisture content determined by Method A and reported as a percentage of oven-dried mass; dried to a constant mass at temperature of 105º C
Ash content and organic matter determined by Method C; dried to constant mass at temperature 440º C

Client: Haley & Aldrich, Inc.			
Project: Nuclear Metals, Inc			
Location: Concord, MA		Project No:	GTX-312539
Boring ID: ---	Sample Type: bag	Tested By:	ckg
Sample ID: HP-1-A_4-4.5	Test Date: 11/06/20	Checked By:	bfs
Depth : 4-4.5 bgs	Test Id: 585959		
Test Comment: ---			
Visual Description: Moist, dark brown silty sand			
Sample Comment: ---			

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	72.8	27.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	99		
#20	0.85	92		
#40	0.42	74		
#60	0.25	54		
#100	0.15	38		
#140	0.11	32		
#200	0.075	27		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0337	22		
---	0.0217	16		
---	0.0128	13		
---	0.0090	10		
---	0.0067	8		
---	0.0048	7		
---	0.0027	5		
---	0.0014	3		

Coefficients

D_{85} = 0.6549 mm D_{30} = 0.0923 mm

D_{60} = 0.2927 mm D_{15} = 0.0172 mm

D_{50} = 0.2188 mm D_{10} = 0.0091 mm

C_u = 32.165 C_c = 3.198

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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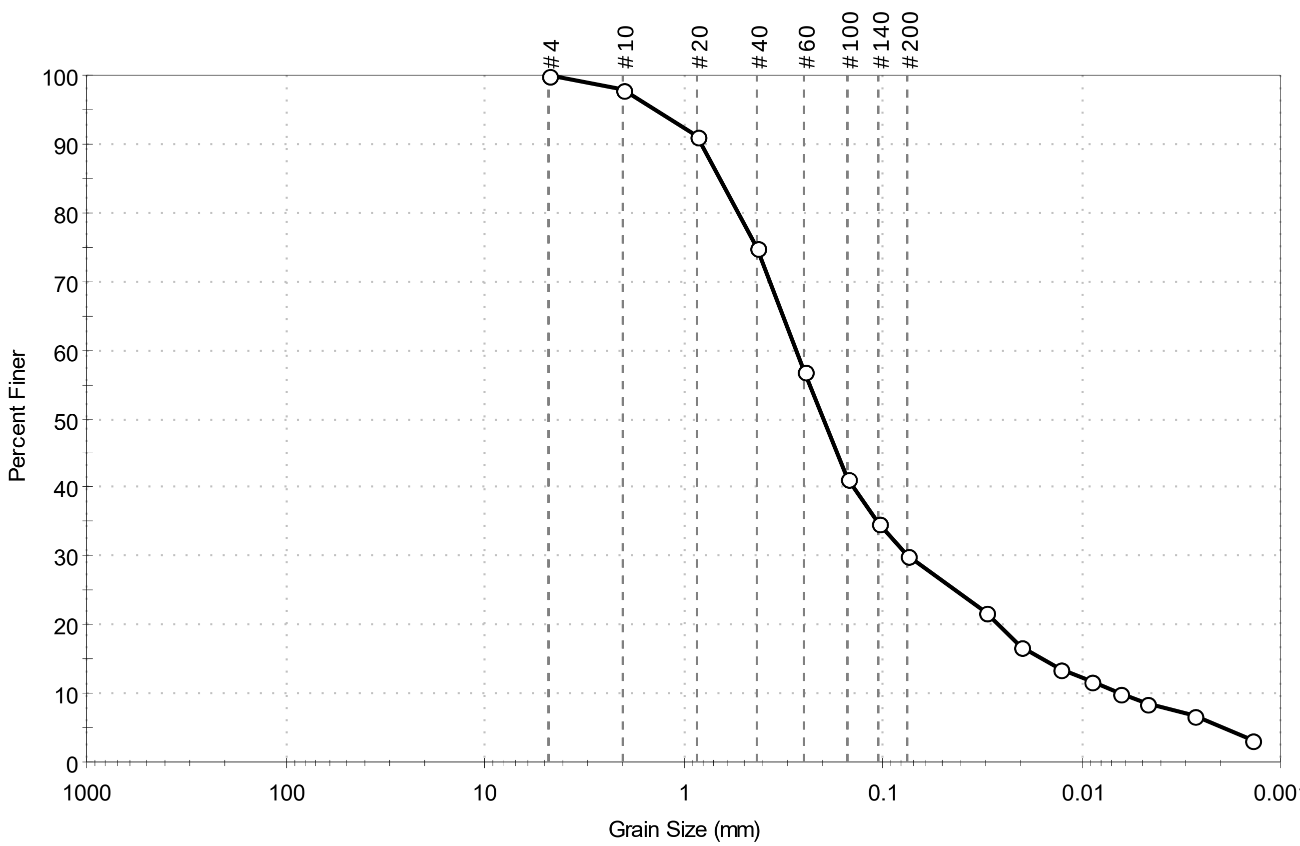
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	HP-4-A_4-6	Test Date:	11/06/20	Checked By:	bfs
Depth :	4-6 bgs	Test Id:	585957		
Test Comment:	---				
Visual Description:	Moist, very dark brown silty sand with organics				
Sample Comment:	--				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	70.0	30.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	98		
#20	0.85	91		
#40	0.42	75		
#60	0.25	57		
#100	0.15	41		
#140	0.11	35		
#200	0.075	30		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0302	22		
---	0.0201	17		
---	0.0130	14		
---	0.0090	12		
---	0.0064	10		
---	0.0047	8		
---	0.0027	7		
---	0.0014	3		

Coefficients

D_{85} = 0.6527 mm | D_{30} = 0.0750 mm
D_{60} = 0.2742 mm | D_{15} = 0.0157 mm
D_{50} = 0.1994 mm | D_{10} = 0.0063 mm
C_u = 43.524 | C_c = 3.256

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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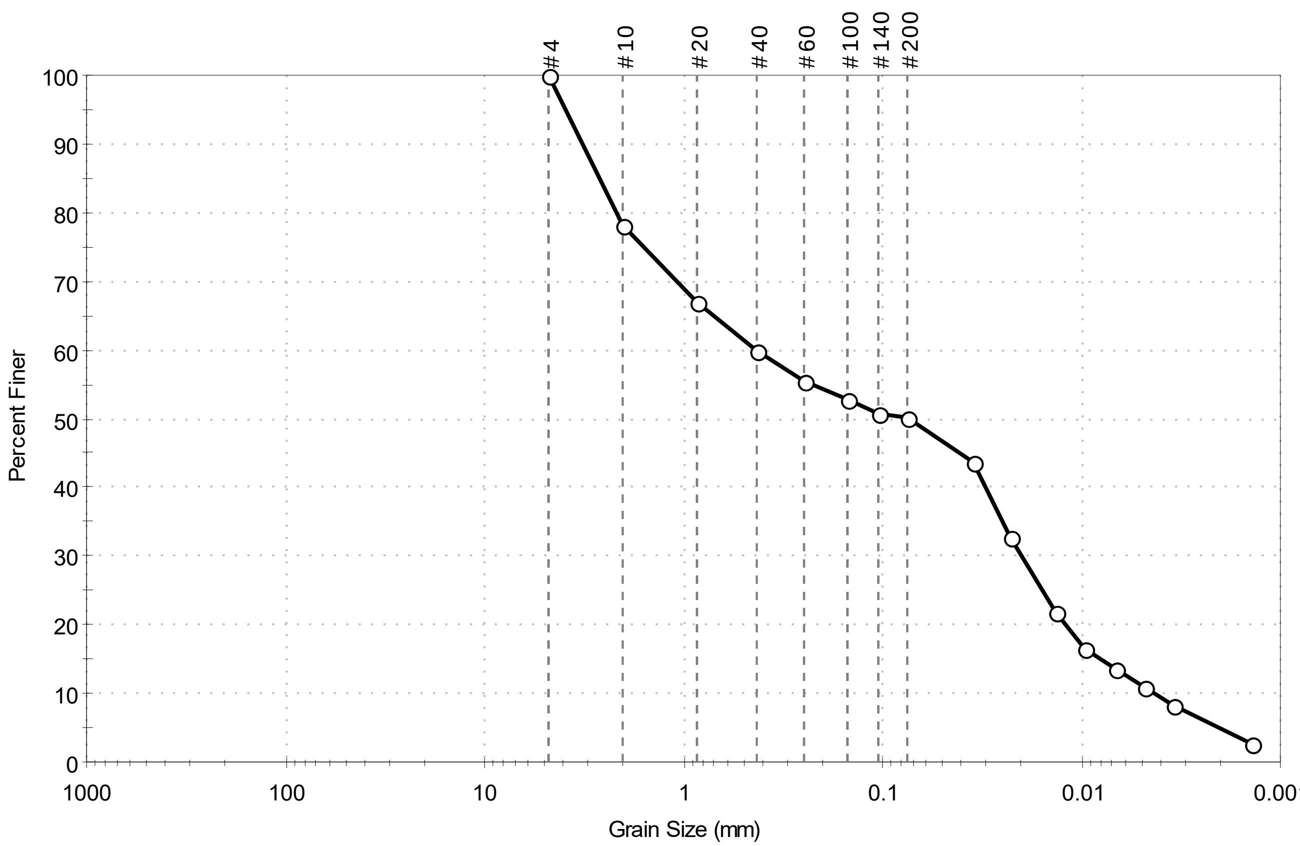
GeoTesting EXPRESS

Client: Haley & Aldrich, Inc.			
Project: Nuclear Metals, Inc			
Location: Concord, MA		Project No:	GTX-312539
Boring ID: ---	Sample Type: bag	Tested By:	ckg
Sample ID: HP-4-C_0-4	Test Date: 11/06/20	Checked By:	bfs
Depth : 0-4 bgs	Test Id: 585958		
Test Comment: ---			
Visual Description: Moist, dark brown sandy silt with organics			
Sample Comment: ---			

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	49.8	50.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	78		
#20	0.85	67		
#40	0.42	60		
#60	0.25	56		
#100	0.15	53		
#140	0.11	51		
#200	0.075	50		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0352	44		
---	0.0227	33		
---	0.0136	22		
---	0.0096	16		
---	0.0067	14		
---	0.0049	11		
---	0.0035	8		
---	0.0014	3		

Coefficients

D_{85} = 2.6227 mm D_{30} = 0.0199 mm

D_{60} = 0.4250 mm D_{15} = 0.0080 mm

D_{50} = 0.0736 mm D_{10} = 0.0043 mm

C_u = 98.837 C_c = 0.217

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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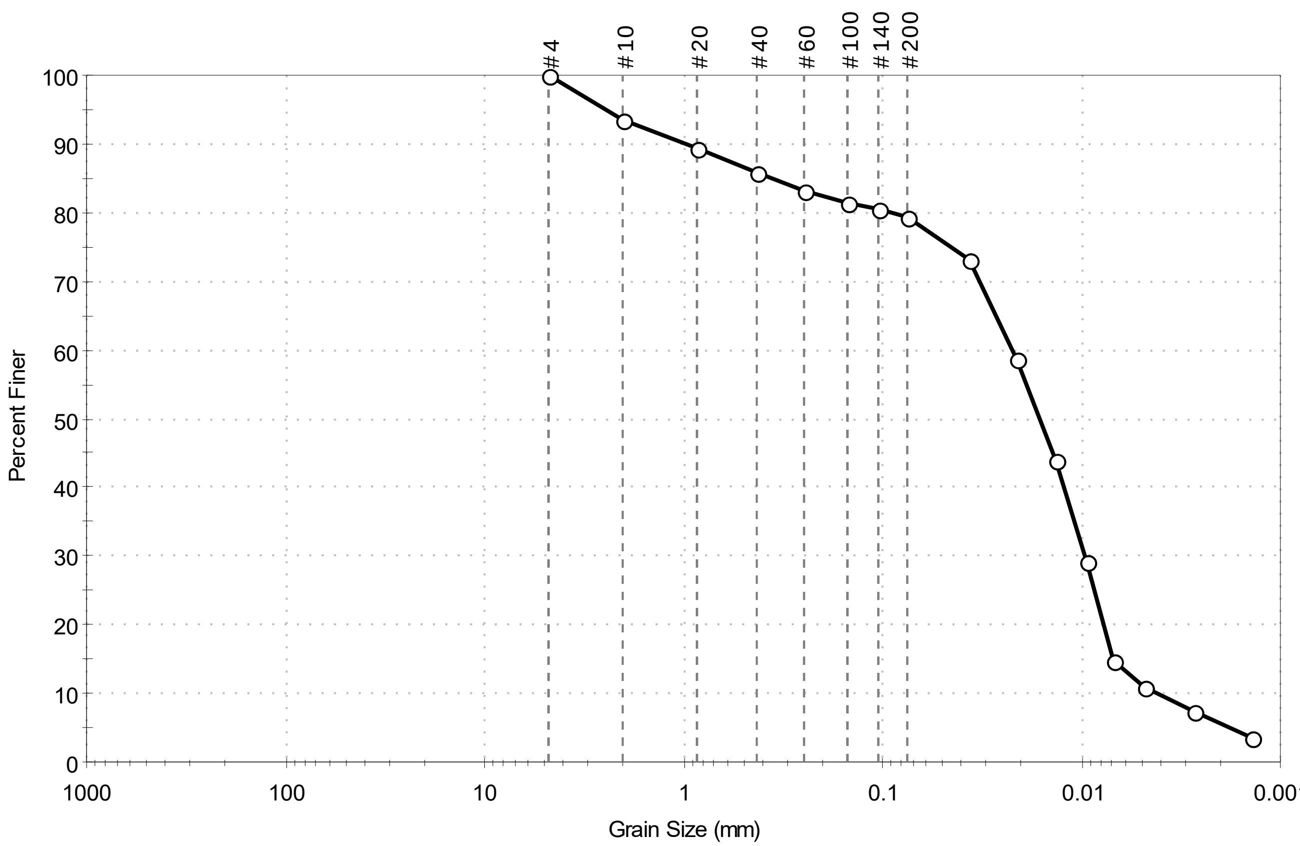
Client:	Haley & Aldrich, Inc.			
Project:	Nuclear Metals, Inc			
Location:	Concord, MA		Project No:	GTX-312539
Boring ID:	---	Sample Type: bag	Tested By:	ckg
Sample ID:	HP-5-B_2-4	Test Date: 11/06/20	Checked By:	bfs
Depth :	2-4 bgs	Test Id: 585956		

Test Comment: ---

Visual Description: Moist, very dark brown silt with sand and organics

Sample Comment: ---

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	20.6	79.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	94		
#20	0.85	89		
#40	0.42	86		
#60	0.25	83		
#100	0.15	81		
#140	0.11	80		
#200	0.075	79		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0369	73		
---	0.0211	59		
---	0.0133	44		
---	0.0094	29		
---	0.0068	15		
---	0.0048	11		
---	0.0027	7		
---	0.0014	4		

Coefficients

D_{85} =0.3653 mm | D_{30} =0.0095 mm

D_{60} =0.0222 mm | D_{15} =0.0069 mm

D_{50} =0.0161 mm | D_{10} =0.0041 mm

C_u =5.415 | C_c =0.992

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

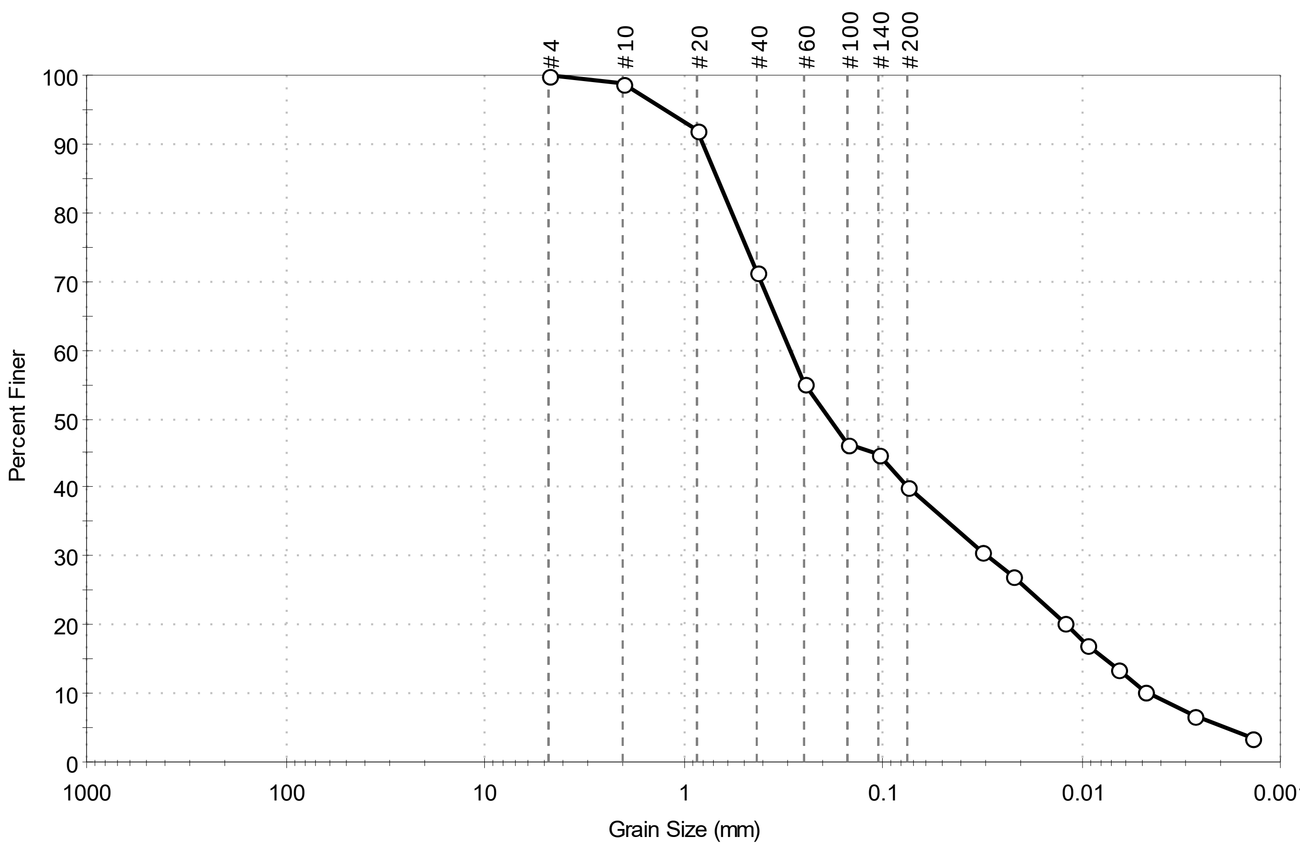
Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

Client:	Haley & Aldrich, Inc.			
Project:	Nuclear Metals, Inc			
Location:	Concord, MA		Project No:	GTX-312539
Boring ID: ---		Sample Type: bag	Tested By:	ckg
Sample ID: HP-6-A_0-2		Test Date: 11/06/20	Checked By:	bfs
Depth : 0-2 bgs		Test Id: 585953		
Test Comment:	---			
Visual Description:	Moist, black silty sand with organics			
Sample Comment:	---			

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	60.0	40.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	99		
#20	0.85	92		
#40	0.42	71		
#60	0.25	55		
#100	0.15	46		
#140	0.11	45		
#200	0.075	40		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0318	31		
---	0.0223	27		
---	0.0122	20		
---	0.0094	17		
---	0.0066	14		
---	0.0048	10		
---	0.0027	7		
---	0.0014	3		

Coefficients

D_{85} = 0.6720 mm　D_{30} = 0.0300 mm

D_{60} = 0.2924 mm　D_{15} = 0.0076 mm

D_{50} = 0.1845 mm　D_{10} = 0.0047 mm

C_u = 62.213　C_c = 0.655

Classification

ASTM　N/A

AASHTO　Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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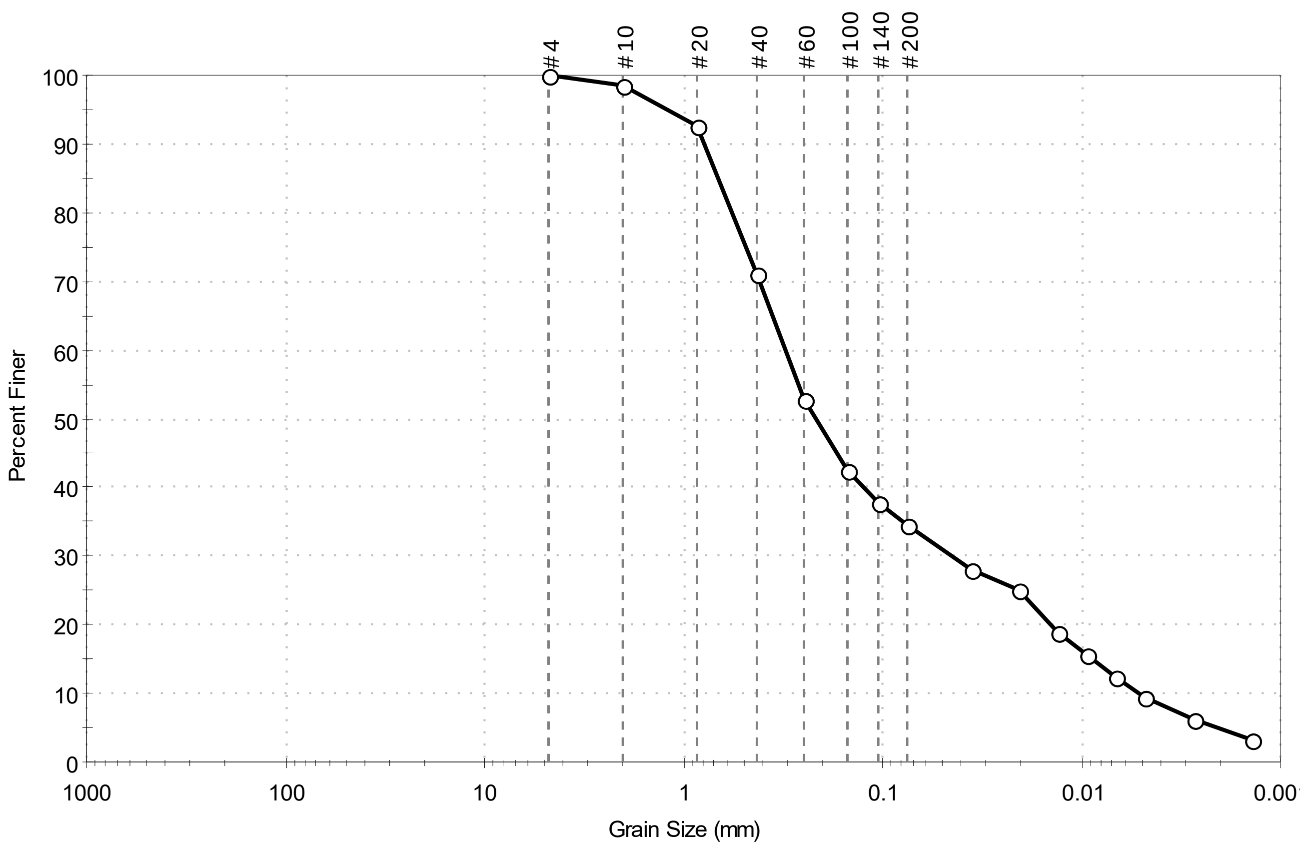
GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: ---	Sample Type: bag	Tested By:	ckg
Sample ID: HP-6-A_2-3.5	Test Date: 11/06/20	Checked By:	bfs
Depth : 2-3.5 bgs	Test Id: 585954		
Test Comment:	---		
Visual Description:	Moist, very dark brown silty sand with organics		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	65.3	34.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	99		
#20	0.85	93		
#40	0.42	71		
#60	0.25	53		
#100	0.15	42		
#140	0.11	38		
#200	0.075	35		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0361	28		
---	0.0206	25		
---	0.0130	19		
---	0.0095	16		
---	0.0067	13		
---	0.0048	9		
---	0.0027	6		
---	0.0014	3		

Coefficients

D_{85} =0.6650 mm D_{30} =0.0445 mm

D_{60} =0.3083 mm D_{15} =0.0089 mm

D_{50} =0.2177 mm D_{10} =0.0051 mm

C_u =60.451 C_c =1.259

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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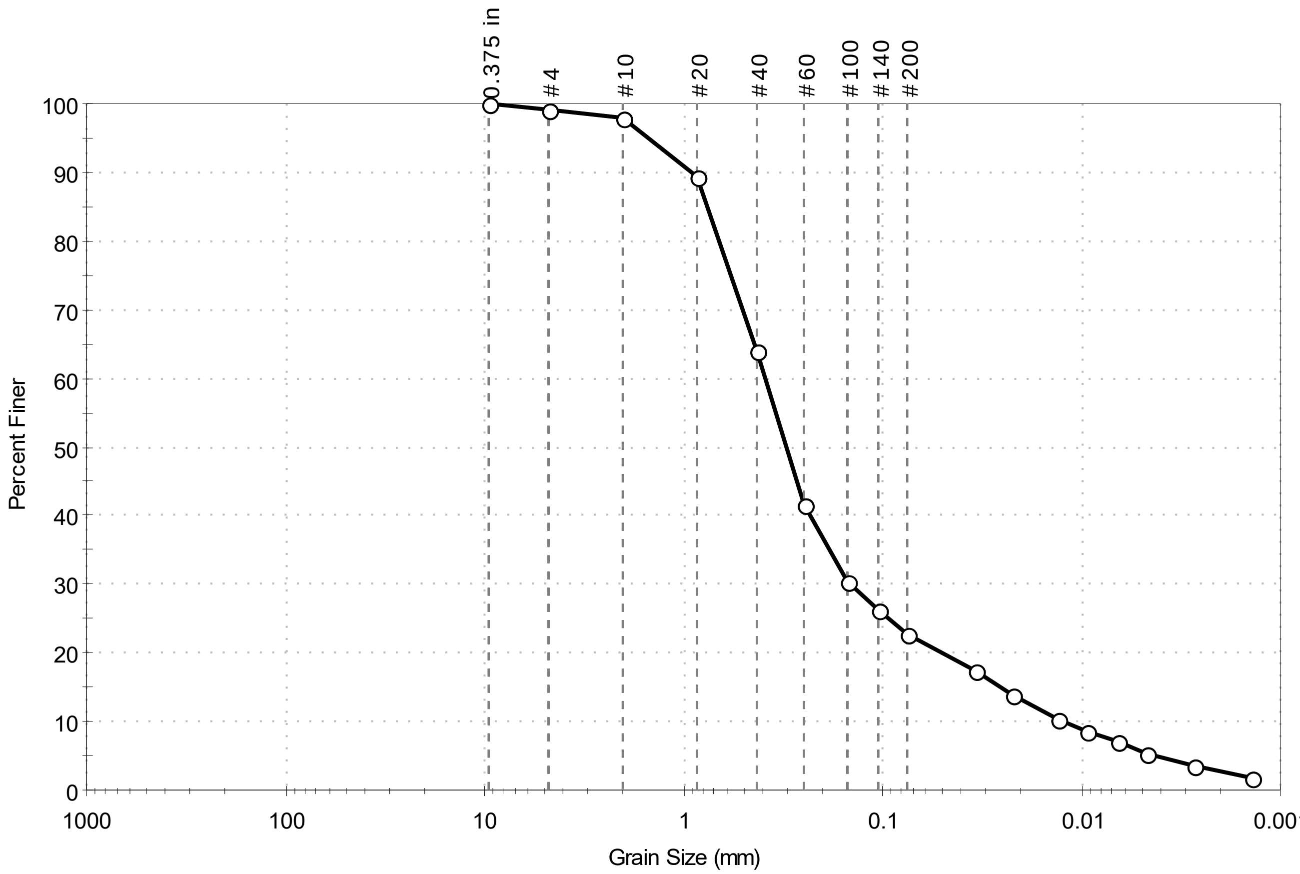
GeoTesting EXPRESS

Client: Haley & Aldrich, Inc.			
Project: Nuclear Metals, Inc			
Location: Concord, MA		Project No:	GTX-312539
Boring ID: ---	Sample Type: bag	Tested By:	ckg
Sample ID: HP-6-A_3.5-4.5	Test Date: 11/06/20	Checked By:	bfs
Depth : 3.5-4.5 bgs	Test Id: 585955		

Test Comment: ---
Visual Description: Moist, dark brown silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.8	76.4	22.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	89		
#40	0.42	64		
#60	0.25	41		
#100	0.15	30		
#140	0.11	26		
#200	0.075	23		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0341	17		
---	0.0221	14		
---	0.0131	10		
---	0.0095	9		
---	0.0066	7		
---	0.0047	5		
---	0.0027	3		
---	0.0014	2		

Coefficients

D_{85} = 0.7544 mm	D_{30} = 0.1464 mm
D_{60} = 0.3877 mm	D_{15} = 0.0252 mm
D_{50} = 0.3059 mm	D_{10} = 0.0121 mm
C_u = 32.041	C_c = 4.569

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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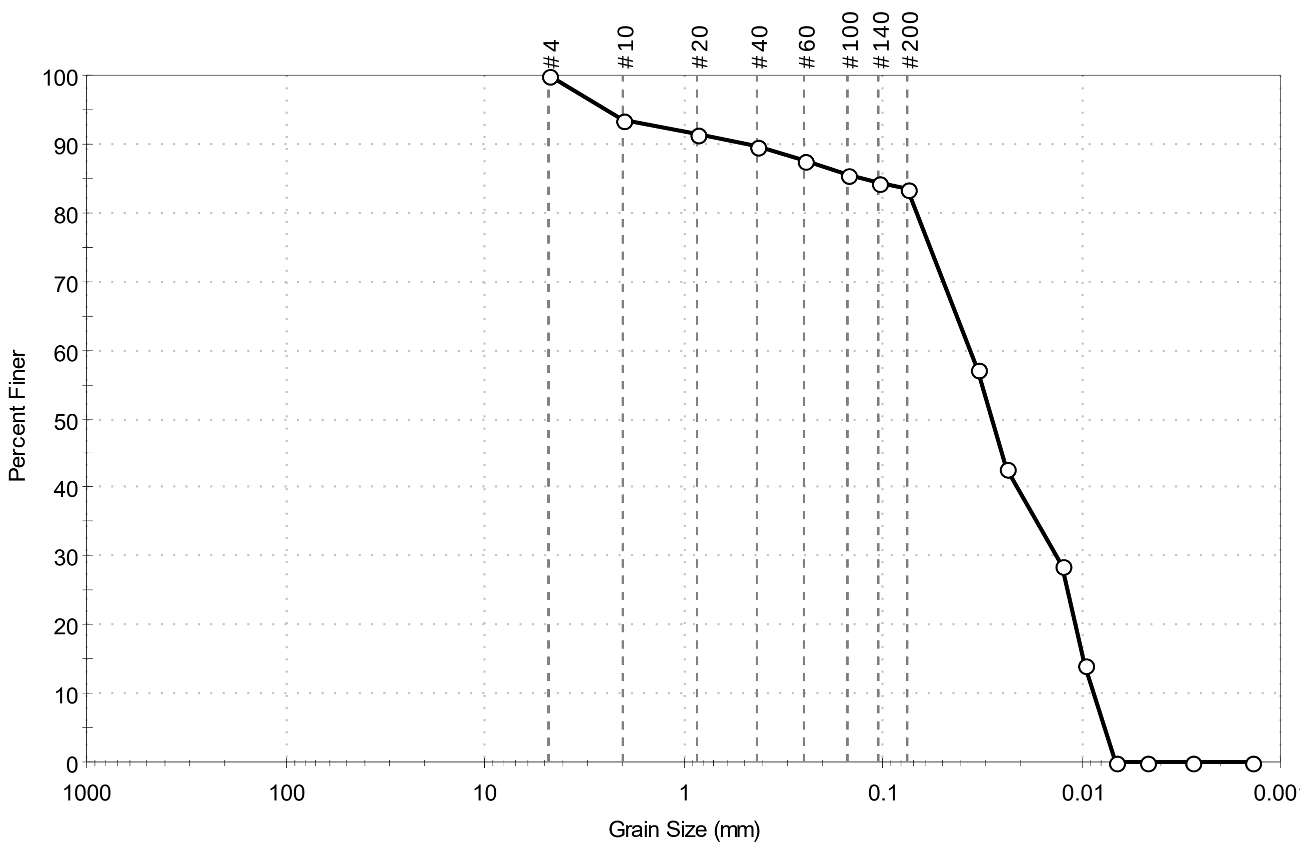
Client:	Haley & Aldrich, Inc.
Project:	Nuclear Metals, Inc
Location:	Concord, MA
Project No:	GTX-312539
Boring ID:	---
Sample Type:	bag
Tested By:	ckg
Sample ID:	HP-7-C_4-6
Test Date:	11/07/20
Checked By:	bfs
Depth :	4-6 bgs
Test Id:	585960
Test Comment:	---
Visual Description:	Moist, very dark brown silt with sand and organics
Sample Comment:	---

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	16.4	83.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	94		
#20	0.85	91		
#40	0.42	90		
#60	0.25	88		
#100	0.15	85		
#140	0.11	84		
#200	0.075	84		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0330	57		
---	0.0237	43		
---	0.0127	29		
---	0.0096	14		
---	0.0067	0		
---	0.0047	0		
---	0.0028	0		
---	0.0014	0		

Coefficients

D_{85} = 0.1308 mm | D_{30} = 0.0135 mm

D_{60} = 0.0360 mm | D_{15} = 0.0098 mm

D_{50} = 0.0279 mm | D_{10} = 0.0087 mm

C_u = 4.138 | C_c = 0.582

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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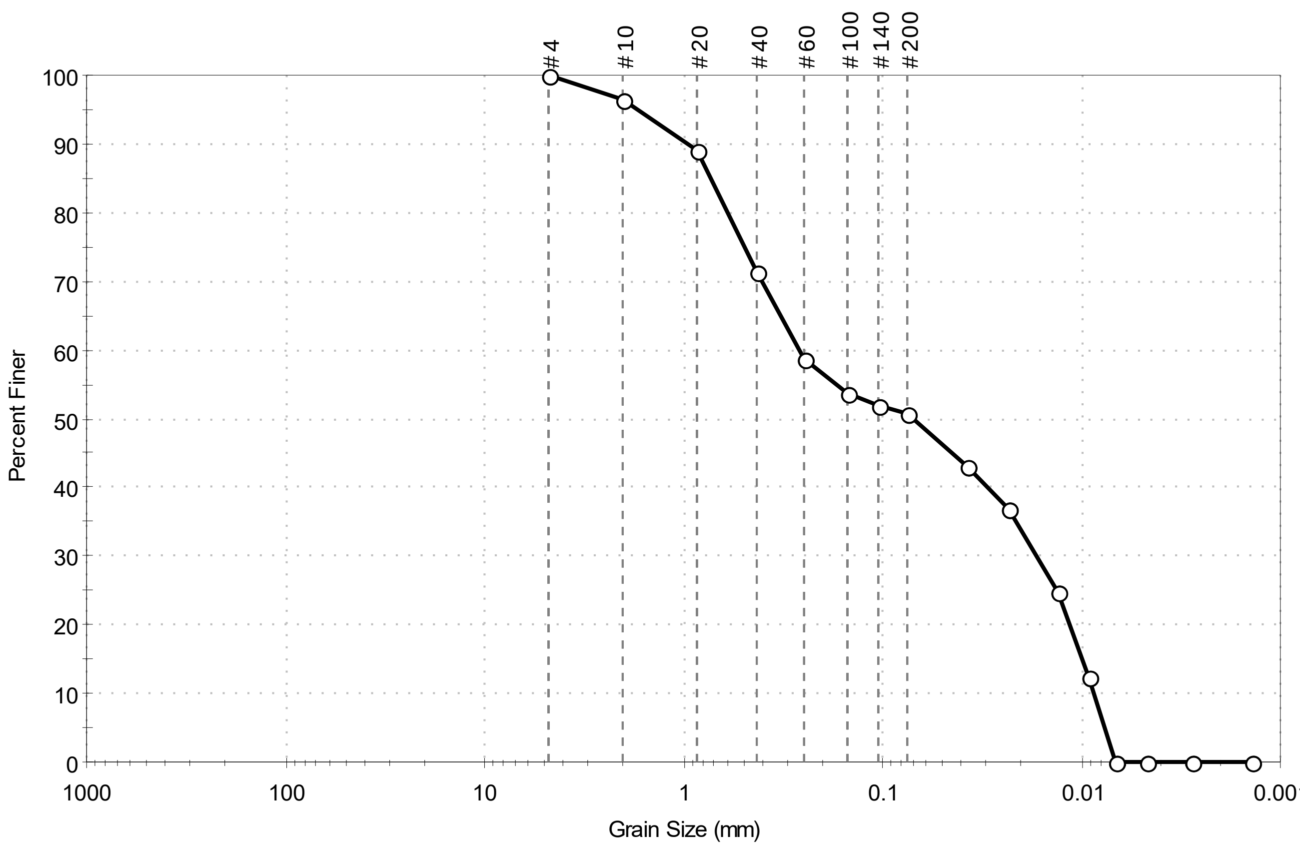
Client: Haley & Aldrich, Inc.			
Project: Nuclear Metals, Inc			
Location: Concord, MA		Project No:	GTX-312539
Boring ID: ---	Sample Type: bag	Tested By:	ckg
Sample ID: HP-8-A_0-4	Test Date: 11/06/20	Checked By:	bfs
Depth : 0-4 bgs	Test Id: 585961		
Test Comment: ---			
Visual Description: Moist, very dark brown sandy silt with organics			
Sample Comment: ---			

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	49.1	50.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	96		
#20	0.85	89		
#40	0.42	72		
#60	0.25	59		
#100	0.15	54		
#140	0.11	52		
#200	0.075	51		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0375	43		
---	0.0236	37		
---	0.0133	25		
---	0.0091	12		
---	0.0068	0		
---	0.0048	0		
---	0.0028	0		
---	0.0014	0		

Coefficients

D_{85} = 0.7258 mm D_{30} = 0.0170 mm

D_{60} = 0.2629 mm D_{15} = 0.0099 mm

D_{50} = 0.0693 mm D_{10} = 0.0086 mm

C_u = 30.570 C_c = 0.128

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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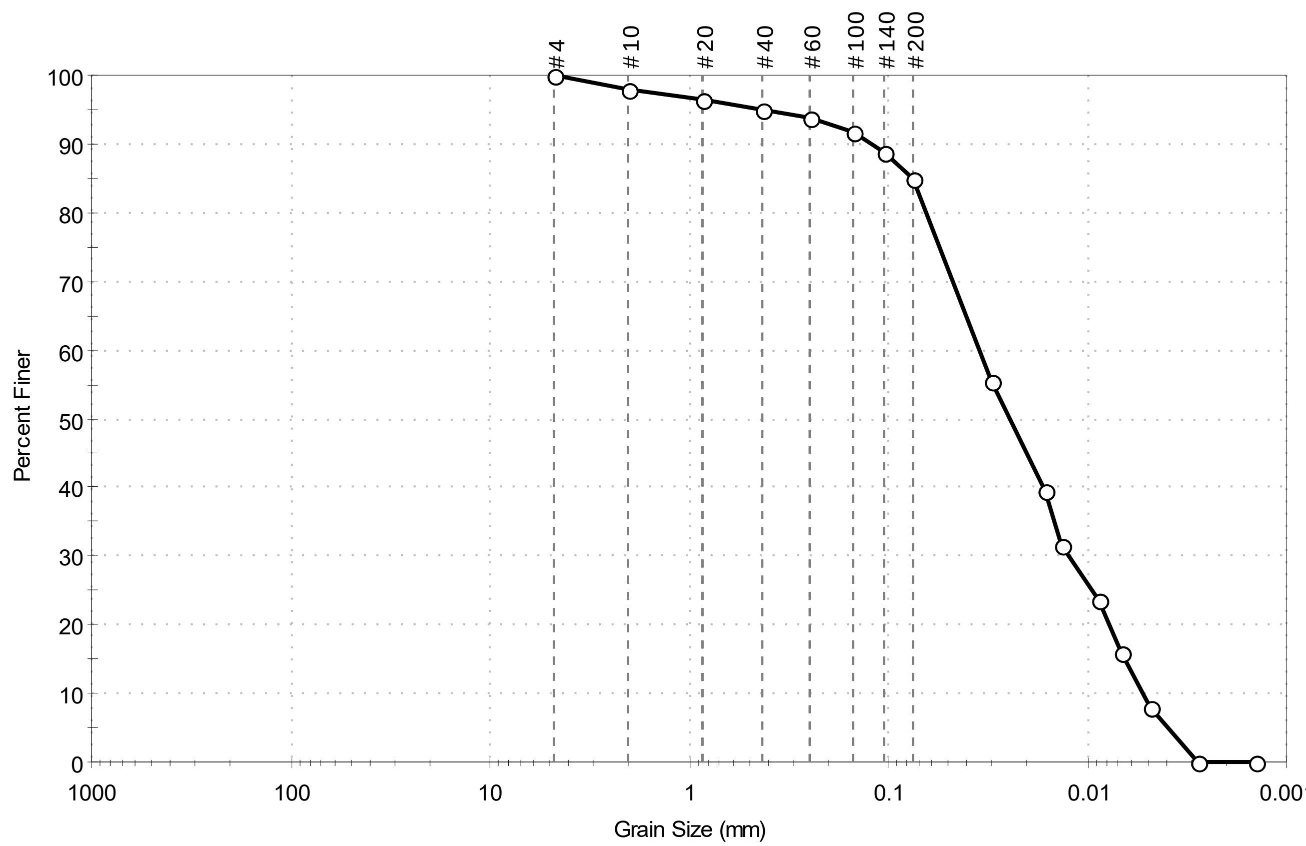
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: ---	Sample Type: bag	Tested By:	ckg
Sample ID: HP-9-A_2-4	Test Date: 11/06/20	Checked By:	bfs
Depth : 2-4 bgs	Test Id: 585962		
Test Comment:	---		
Visual Description:	Moist, very dark brown silt with sand and organics		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	15.1	84.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	98		
#20	0.85	97		
#40	0.42	95		
#60	0.25	94		
#100	0.15	92		
#140	0.11	89		
#200	0.075	85		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0303	55		
---	0.0164	40		
---	0.0135	32		
---	0.0087	24		
---	0.0068	16		
---	0.0048	8		
---	0.0028	0		
---	0.0014	0		

Coefficients

D_{85} = 0.0760 mm | D_{30} = 0.0124 mm
D_{60} = 0.0349 mm | D_{15} = 0.0066 mm
D_{50} = 0.0246 mm | D_{10} = 0.0052 mm
C_u = 6.712 | C_c = 0.847

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---
Dispersion Device : Apparatus A - Mech Mixer
Dispersion Period : 1 minute
Est. Specific Gravity : 2.65
Separation of Sample: #200 Sieve

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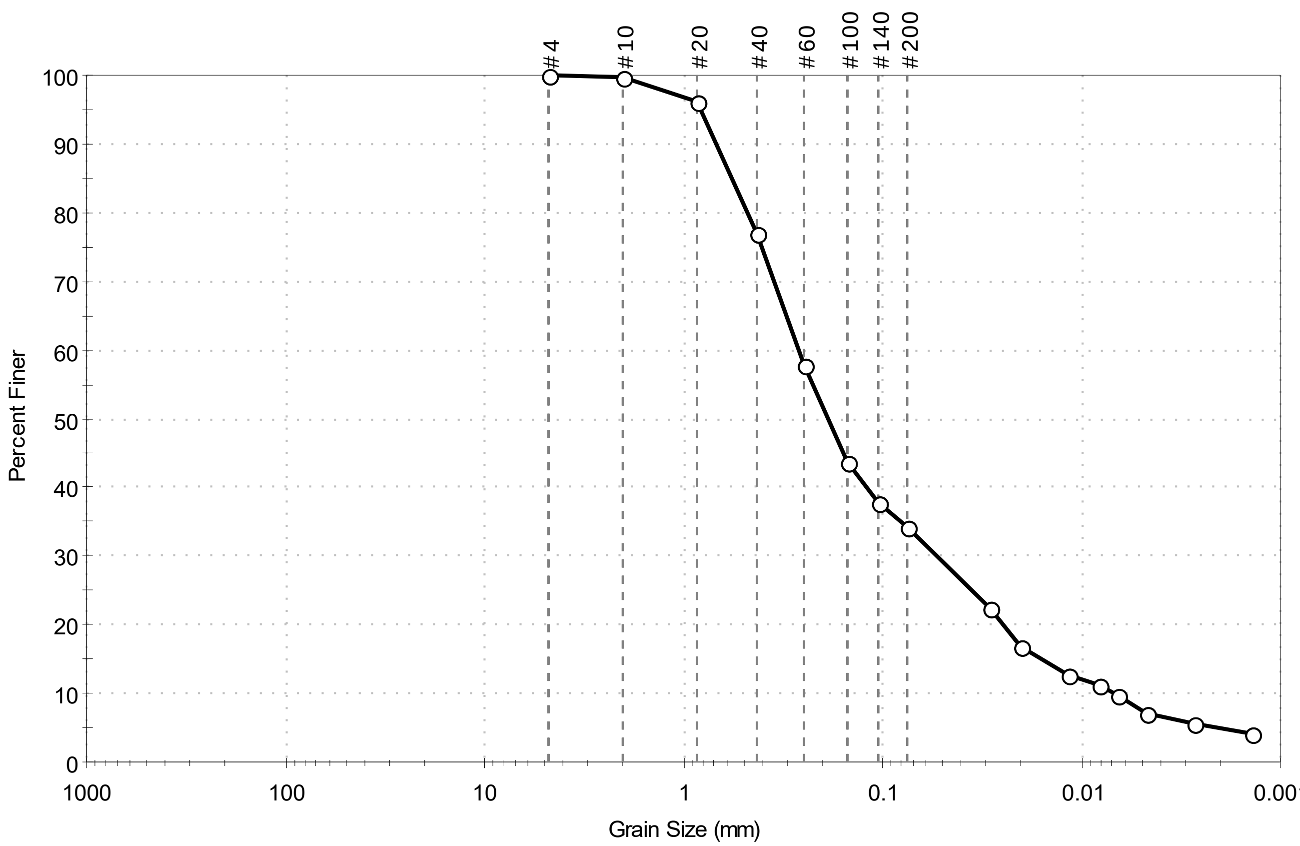
GeoTesting EXPRESS

Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	HP-9-A_5.5-6.5	Test Date:	11/06/20	Checked By:	bfs
Depth :	5.5-6.5 bgs	Test Id:	585963		
Test Comment:	---				
Visual Description:	Moist, very dark brown silty sand with organics				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	65.8	34.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	96		
#40	0.42	77		
#60	0.25	58		
#100	0.15	44		
#140	0.11	38		
#200	0.075	34		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0291	22		
---	0.0202	17		
---	0.0117	13		
---	0.0081	11		
---	0.0066	10		
---	0.0047	7		
---	0.0027	6		
---	0.0014	4		

Coefficients

D_{85} = 0.5653 mm D_{30} = 0.0535 mm

D_{60} = 0.2654 mm D_{15} = 0.0159 mm

D_{50} = 0.1887 mm D_{10} = 0.0068 mm

C_u = 39.029 C_c = 1.586

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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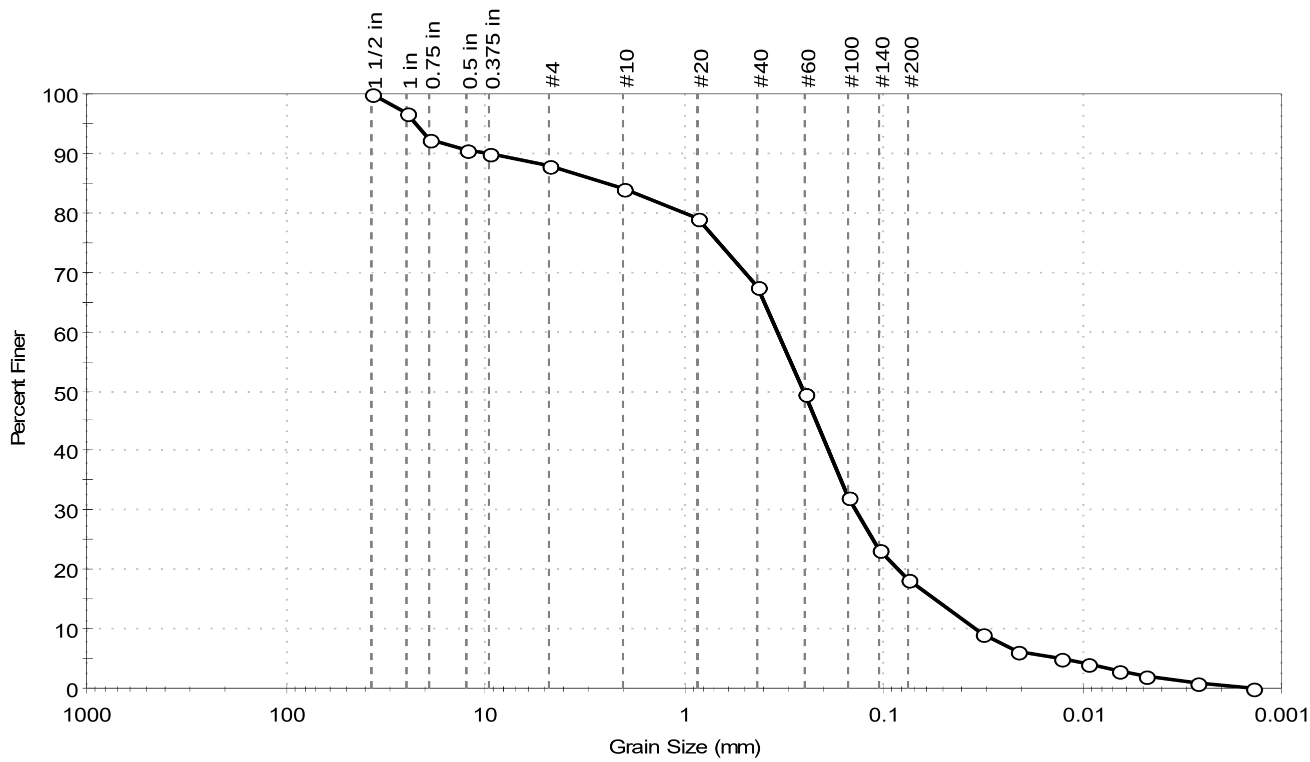
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: ---	Sample Type: bag	Tested By:	ckg
Sample ID: TS-1-A_0-1	Test Date: 11/06/20	Checked By:	bfs
Depth : 0-1 bgs	Test Id: 588980		

Test Comment: ---
Visual Description: Moist, brown clayey sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	12.2	69.4	18.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	97		
0.75 in	19.00	92		
0.5 in	12.50	91		
0.375 in	9.50	90		
#4	4.75	88		
#10	2.00	84		
#20	0.85	79		
#40	0.42	67		
#60	0.25	50		
#100	0.15	32		
#140	0.11	23		
#200	0.075	18		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0318	9		
---	0.0212	6		
---	0.0129	5		
---	0.0095	4		
---	0.0066	3		
---	0.0048	2		
---	0.0027	1		
---	0.0014	0		

Coefficients

D_{85} = 2.5098 mm	D_{30} = 0.1381 mm
D_{60} = 0.3407 mm	D_{15} = 0.0545 mm
D_{50} = 0.2536 mm	D_{10} = 0.0340 mm
C_u = 10.021	C_c = 1.646

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
Sand/Gravel Hardness : HARD
Dispersion Device : Apparatus A - Mech Mixer
Dispersion Period : 1 minute
Est. Specific Gravity : 2.65
Separation of Sample: #200 Sieve

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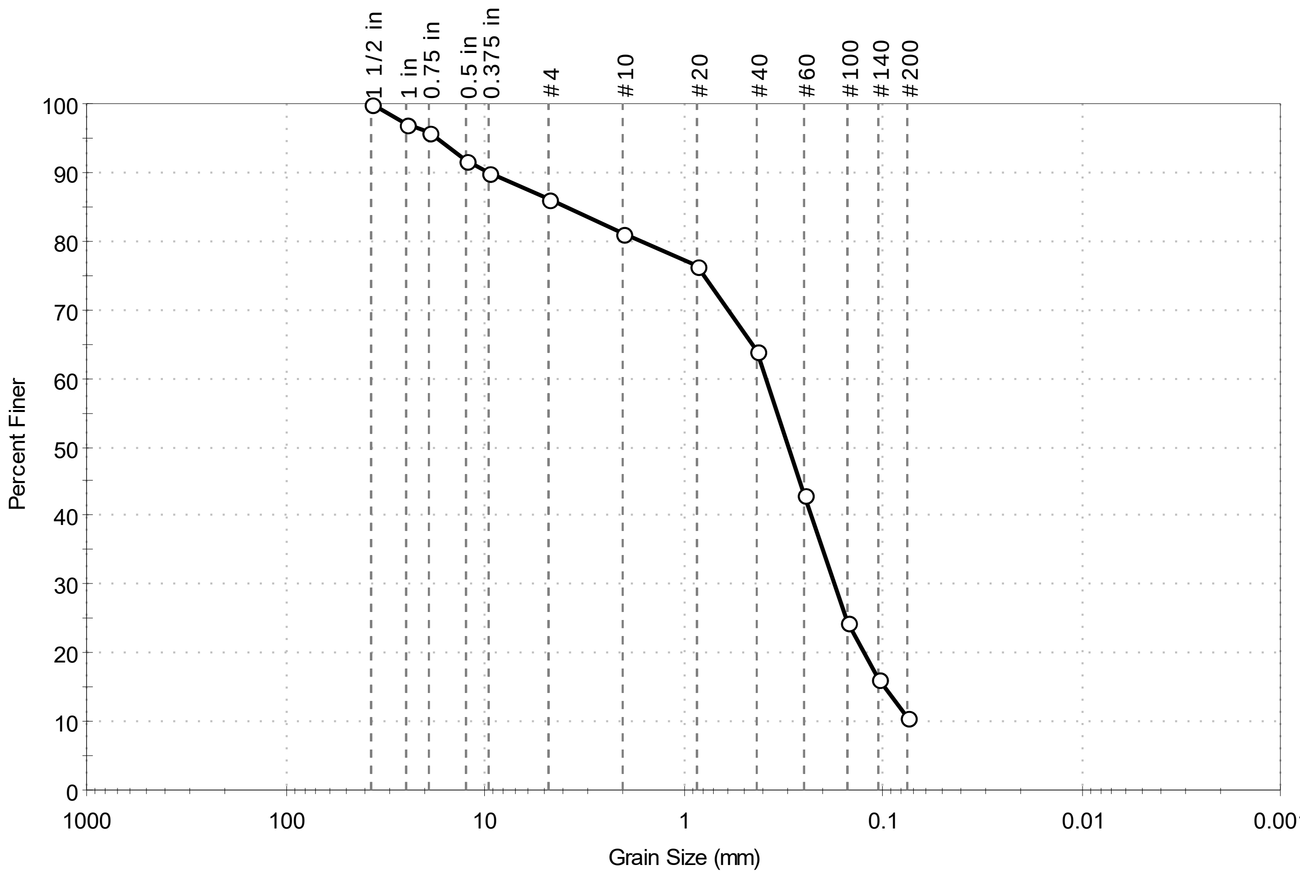
Client:	Haley & Aldrich, Inc.
Project:	Nuclear Metals, Inc
Location:	Concord, MA
Project No:	GTX-312539
Boring ID:	---
Sample Type:	bag
Tested By:	ckg
Sample ID:	TS-1-A_1-3
Test Date:	11/02/20
Checked By:	bfs
Depth :	1-3 bgs
Test Id:	585941
Test Comment:	---
Visual Description:	Moist, dark olive brown sand with silt
Sample Comment:	---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	14.0	75.4	10.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	97		
0.75 in	19.00	96		
0.5 in	12.50	92		
0.375 in	9.50	90		
#4	4.75	86		
#10	2.00	81		
#20	0.85	76		
#40	0.42	64		
#60	0.25	43		
#100	0.15	24		
#140	0.11	16		
#200	0.075	11		

Coefficients

D_{85} =3.9732 mm
D_{30} =0.1746 mm
D_{60} =0.3852 mm
D_{15} =0.0984 mm
D_{50} =0.2987 mm
D_{10} =N/A
C_u =N/A
C_c =N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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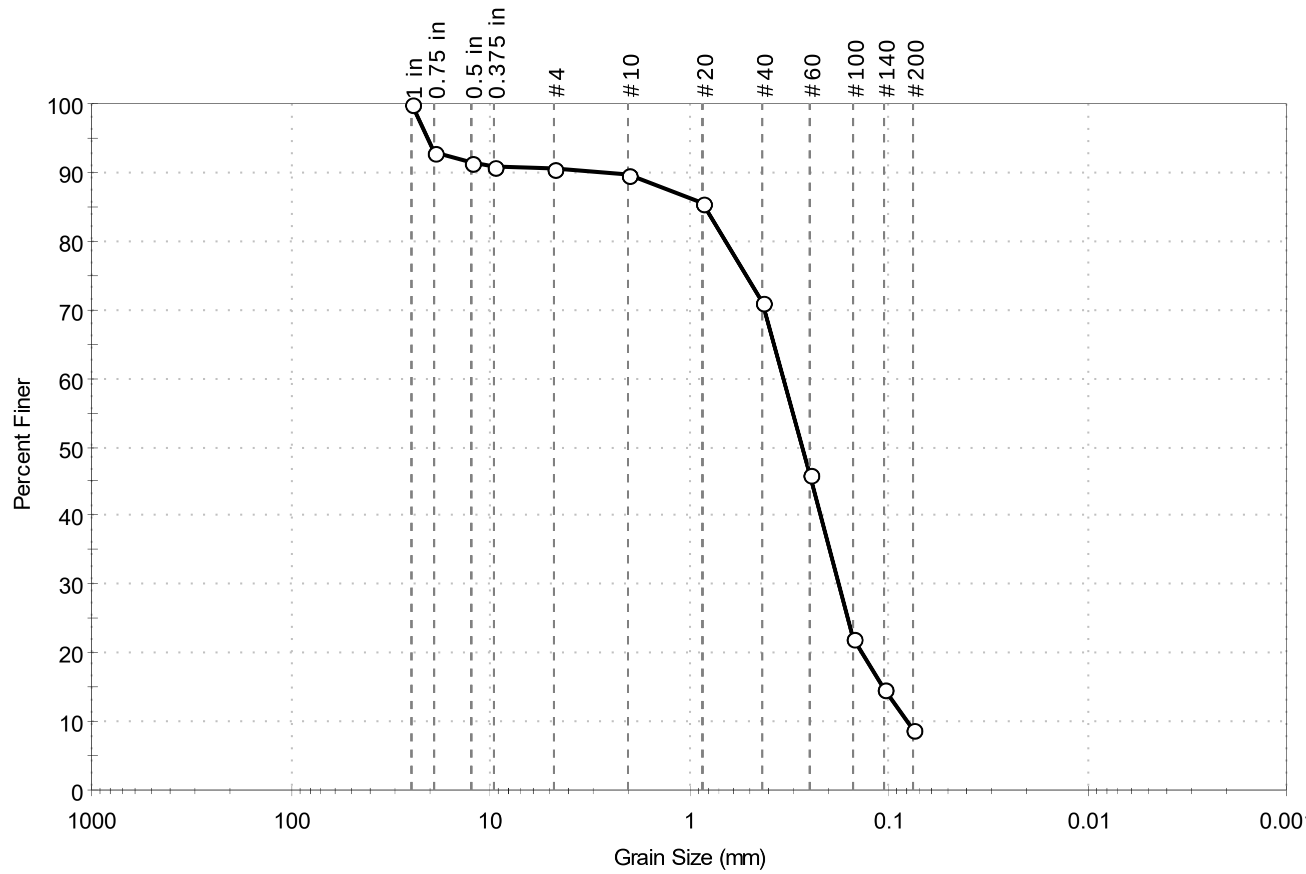
Client:	Haley & Aldrich, Inc.			
Project:	Nuclear Metals, Inc			
Location:	Concord, MA		Project No:	GTX-312539
Boring ID:	---	Sample Type: bag	Tested By:	ckg
Sample ID:	TS-1-B_3-4.5	Test Date: 11/02/20	Checked By:	bfs
Depth :	3-4.5 bgs	Test Id: 585942		
Test Comment:	---			
Visual Description:	Moist, yellowish brown sand with silt			
Sample Comment:	---			

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	9.3	81.8	8.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	93		
0.5 in	12.50	92		
0.375 in	9.50	91		
#4	4.75	91		
#10	2.00	90		
#20	0.85	85		
#40	0.42	71		
#60	0.25	46		
#100	0.15	22		
#140	0.11	15		
#200	0.075	8.9		

Coefficients

D_{85} = 0.8321 mm	D_{30} = 0.1772 mm
D_{60} = 0.3364 mm	D_{15} = 0.1069 mm
D_{50} = 0.2720 mm	D_{10} = 0.0801 mm
C_u = 4.200	C_c = 1.165

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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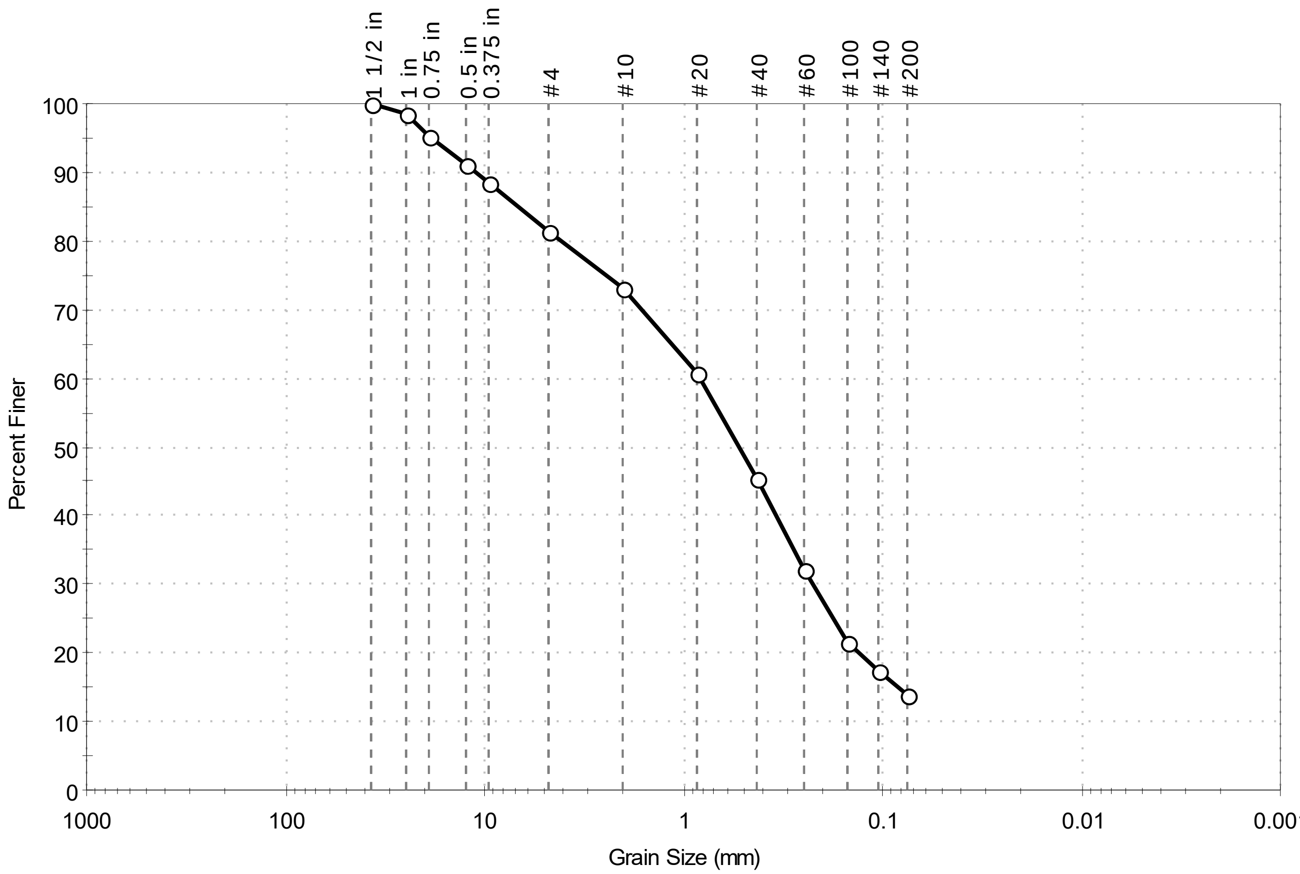
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	TS-2-B_1-3	Test Date:	11/02/20	Checked By:	bfs
Depth :	1-3 bgs	Test Id:	585944		
Test Comment:	---				
Visual Description:	Moist, brown silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	18.7	67.5	13.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	99		
0.75 in	19.00	95		
0.5 in	12.50	91		
0.375 in	9.50	89		
#4	4.75	81		
#10	2.00	73		
#20	0.85	61		
#40	0.42	45		
#60	0.25	32		
#100	0.15	22		
#140	0.11	17		
#200	0.075	14		

Coefficients

D_{85} = 6.7686 mm D_{30} = 0.2255 mm
D_{60} = 0.8182 mm D_{15} = 0.0842 mm
D_{50} = 0.5227 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM   N/A

AASHTO   Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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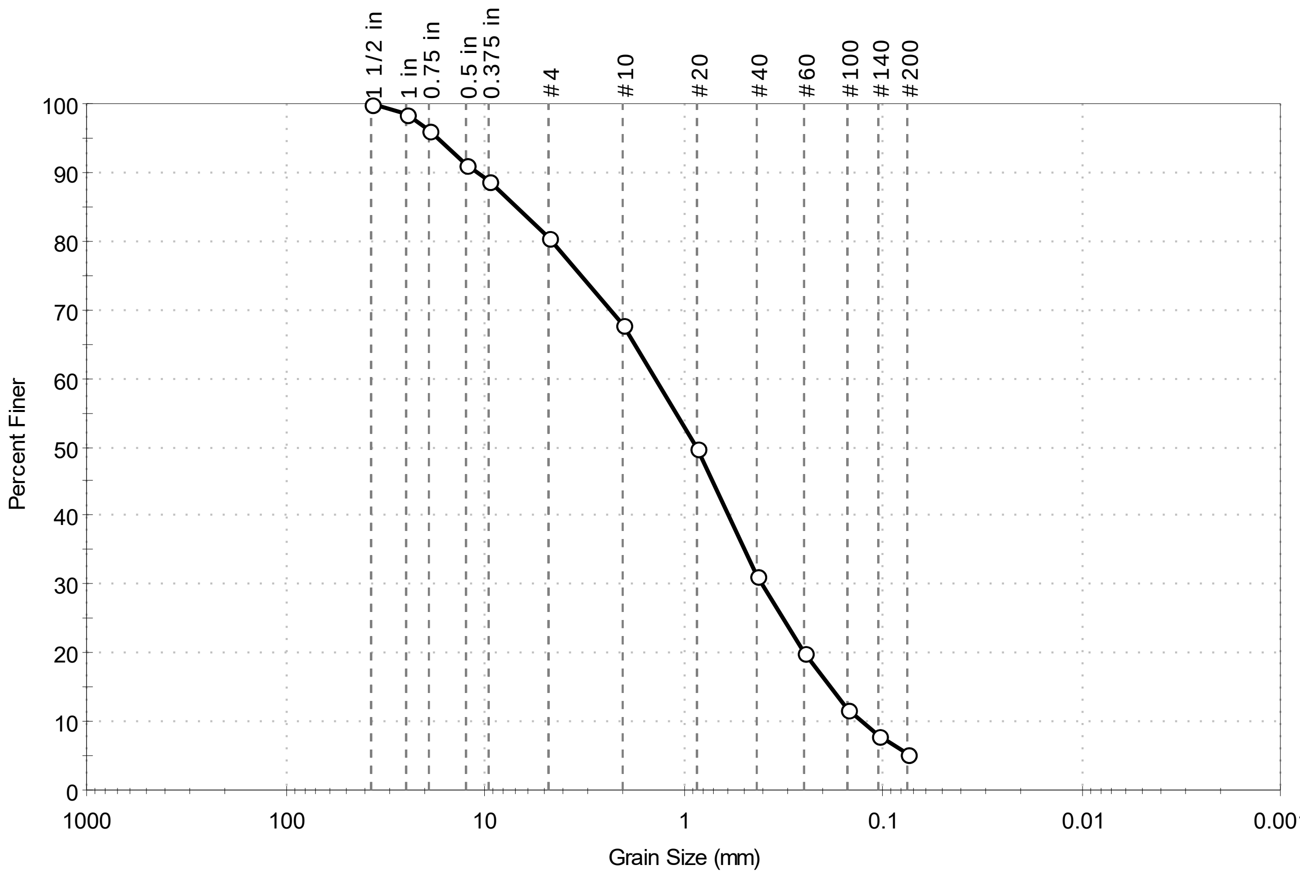
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	TS-3-C_2-4	Test Date:	11/02/20	Checked By:	bfs
Depth :	2-4 bgs	Test Id:	585943		

Test Comment: ---
Visual Description: Moist, dark yellowish brown sand with silt and gravel
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	19.3	75.4	5.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	99		
0.75 in	19.00	96		
0.5 in	12.50	91		
0.375 in	9.50	89		
#4	4.75	81		
#10	2.00	68		
#20	0.85	50		
#40	0.42	31		
#60	0.25	20		
#100	0.15	12		
#140	0.11	8		
#200	0.075	5.3		

Coefficients

D_{85} = 6.8837 mm D_{30} = 0.4013 mm
D_{60} = 1.3824 mm D_{15} = 0.1838 mm
D_{50} = 0.8611 mm D_{10} = 0.1283 mm
C_u = 10.775 C_c = 0.908

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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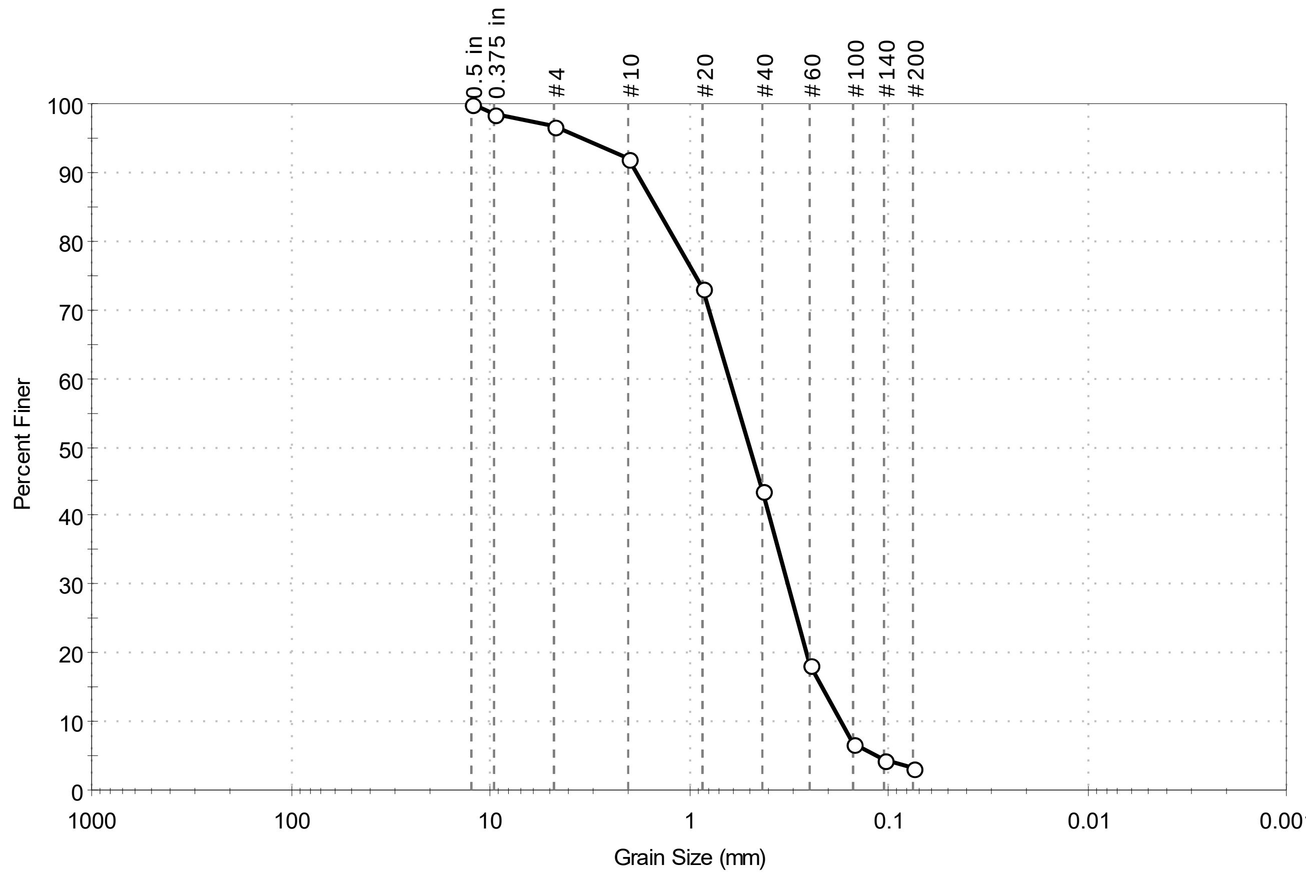
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: ---	Sample Type: bag	Tested By:	ckg
Sample ID: TS-4-C_2-4	Test Date: 11/02/20	Checked By:	bfs
Depth : 2-4 bgs	Test Id: 585945		

Test Comment: ---

Visual Description: Moist, brown sand

Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	3.4	93.3	3.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	97		
#10	2.00	92		
#20	0.85	73		
#40	0.42	44		
#60	0.25	18		
#100	0.15	7		
#140	0.11	4		
#200	0.075	3.3		

Coefficients

D_{85} = 1.4539 mm　　D_{30} = 0.3190 mm

D_{60} = 0.6236 mm　　D_{15} = 0.2161 mm

D_{50} = 0.4926 mm　　D_{10} = 0.1736 mm

C_u = 3.592　　C_c = 0.940

Classification

ASTM　Poorly graded SAND (SP)

AASHTO　Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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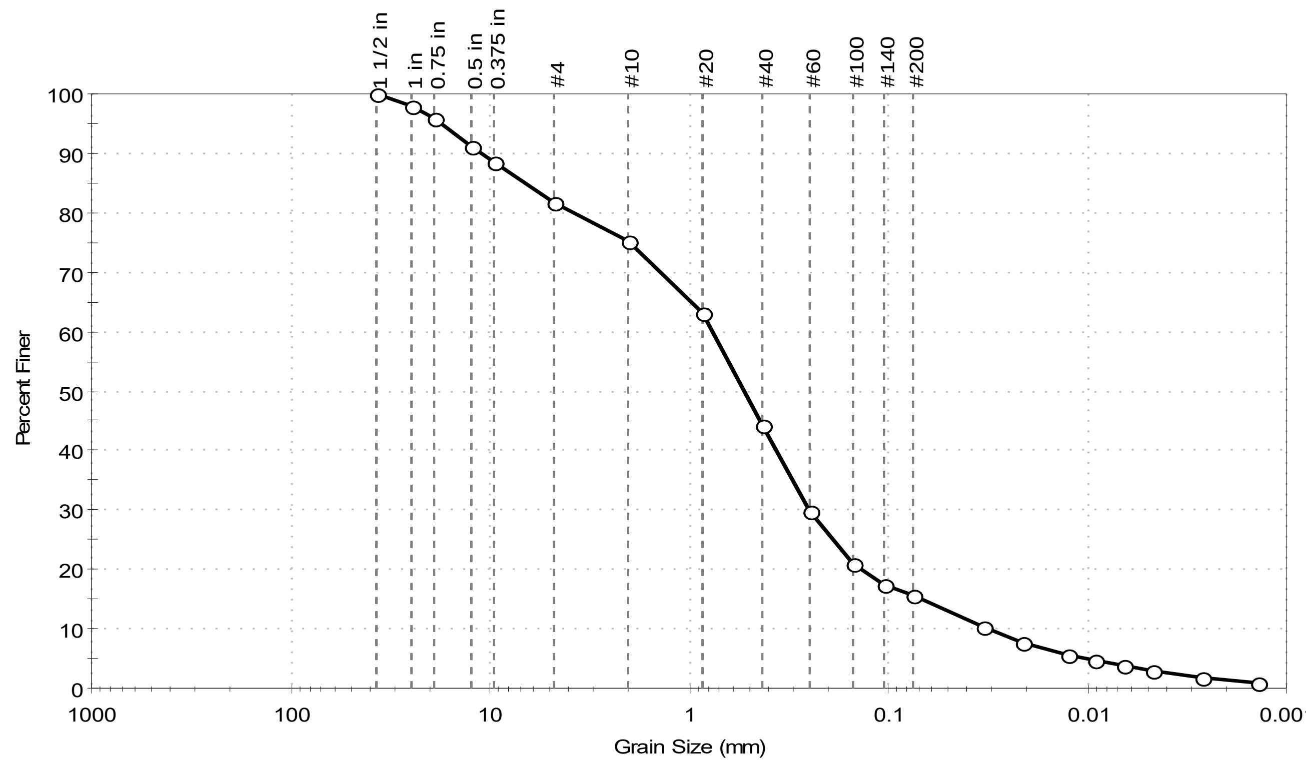
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID: ---	Sample Type: bag	Tested By:	ckg
Sample ID: TS-6-A_0-2	Test Date: 11/06/20	Checked By:	bfs
Depth : 0-2 bgs	Test Id: 585951		

Test Comment: ---

Visual Description: Moist, brown silty sand with gravel

Sample Comment: ---

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	18.2	66.3	15.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	98		
0.75 in	19.00	96		
0.5 in	12.50	91		
0.375 in	9.50	89		
#4	4.75	82		
#10	2.00	75		
#20	0.85	63		
#40	0.42	44		
#60	0.25	30		
#100	0.15	21		
#140	0.11	17		
#200	0.075	16		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0333	10		
---	0.0211	8		
---	0.0126	6		
---	0.0092	5		
---	0.0066	4		
---	0.0047	3		
---	0.0027	2		
---	0.0014	1		

Coefficients

D_{85} = 6.5773 mm D_{30} = 0.2530 mm

D_{60} = 0.7610 mm D_{15} = 0.0690 mm

D_{50} = 0.5253 mm D_{10} = 0.0313 mm

C_u = 24.313 C_c = 2.687

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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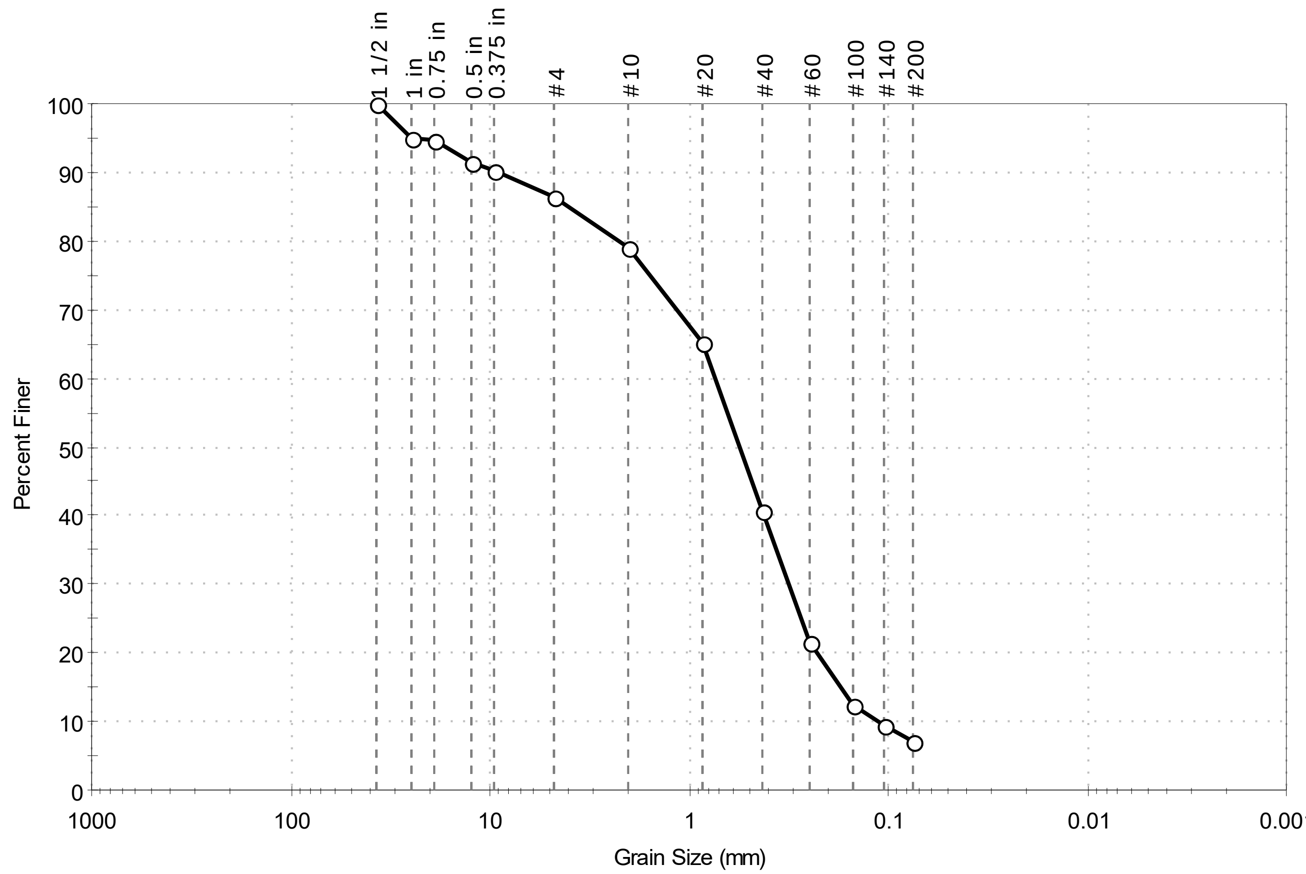
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539
Boring ID:	---	Sample Type:	bag
Tested By:	ckg		
Sample ID:	TS-6-A_2-3.5	Test Date:	11/02/20
Checked By:	bfs		
Depth :	2-3.5 bgs	Test Id:	585946
Test Comment:	---		
Visual Description:	Moist, dark yellowish brown sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	13.7	79.2	7.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	95		
0.75 in	19.00	95		
0.5 in	12.50	91		
0.375 in	9.50	90		
#4	4.75	86		
#10	2.00	79		
#20	0.85	65		
#40	0.42	41		
#60	0.25	22		
#100	0.15	12		
#140	0.11	9		
#200	0.075	7.1		

Coefficients

D_{85} =4.0816 mm D_{30} =0.3157 mm
D_{60} =0.7347 mm D_{15} =0.1733 mm
D_{50} =0.5526 mm D_{10} =0.1128 mm
C_u =6.513 C_c =1.203

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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GeoTesting EXPRESS

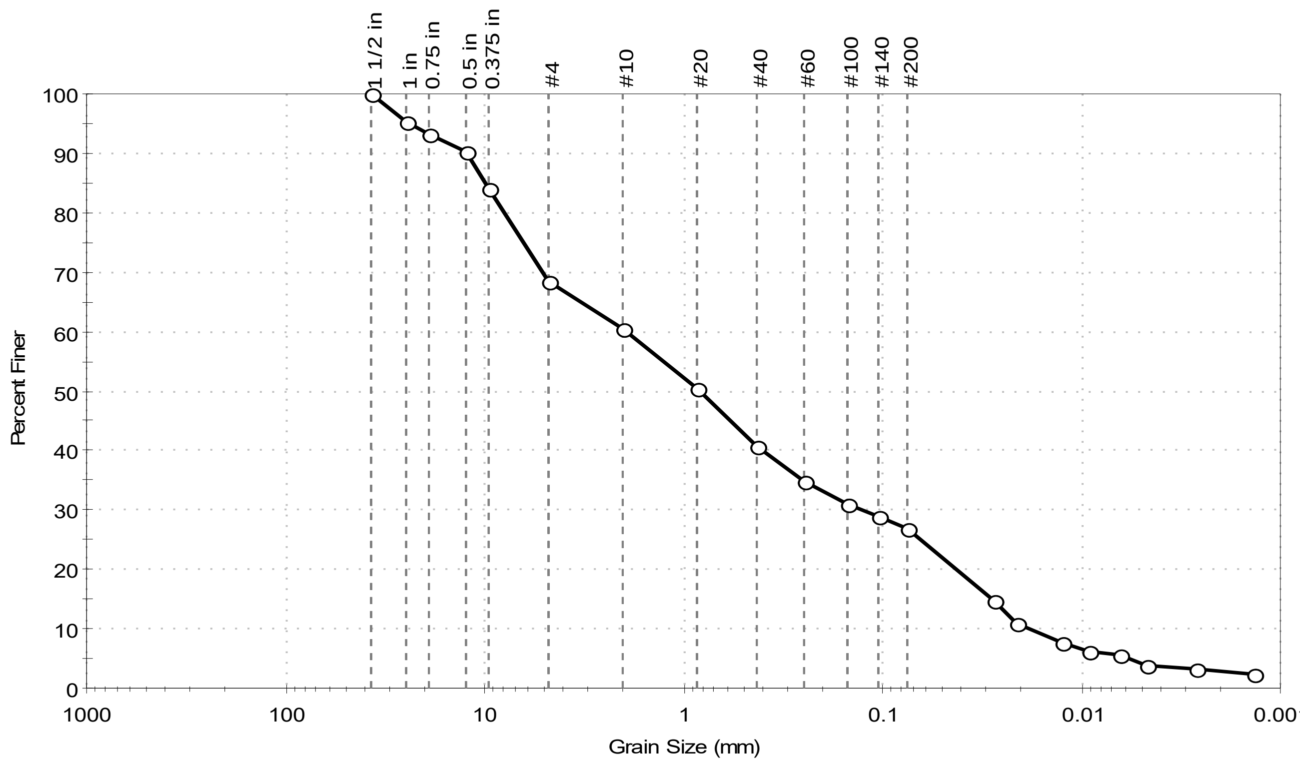
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	TS-6-C_0-1.6	Test Date:	11/06/20	Checked By:	bfs
Depth :	0-1.6 bgs	Test Id:	585952		

Test Comment: ---

Visual Description: Moist, dark olive brown clayey sand with gravel

Sample Comment: ---

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	31.5	41.6	26.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	95		
0.75 in	19.00	93		
0.5 in	12.50	90		
0.375 in	9.50	84		
#4	4.75	69		
#10	2.00	60		
#20	0.85	50		
#40	0.42	41		
#60	0.25	35		
#100	0.15	31		
#140	0.11	29		
#200	0.075	27		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0278	15		
---	0.0212	11		
---	0.0127	8		
---	0.0091	6		
---	0.0064	5		
---	0.0047	4		
---	0.0026	3		
---	0.0014	2		

Coefficients

D_{85} = 9.9258 mm D_{30} = 0.1297 mm

D_{60} = 1.9374 mm D_{15} = 0.0282 mm

D_{50} = 0.8236 mm D_{10} = 0.0182 mm

C_u = 106.451 C_c = 0.477

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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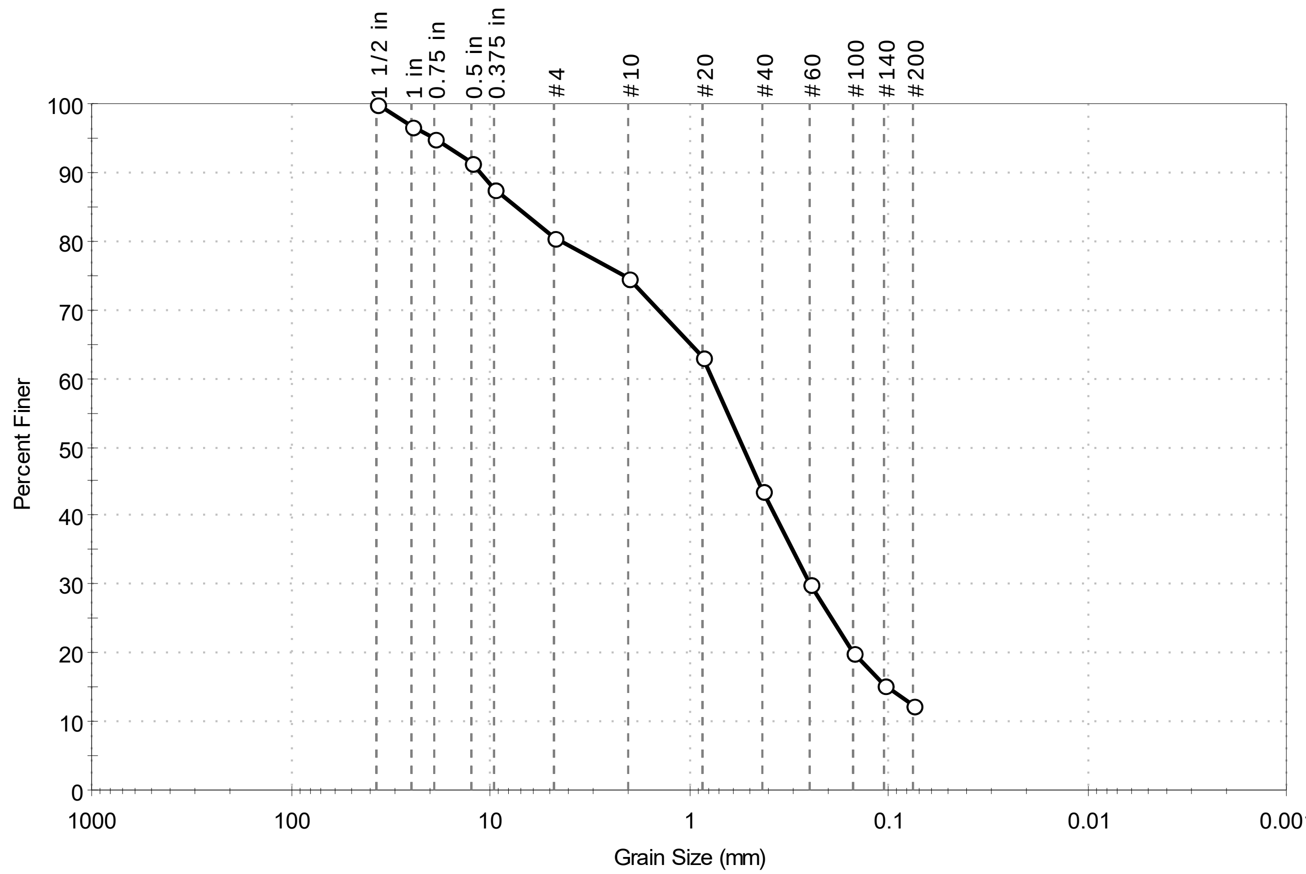
Client:	Haley & Aldrich, Inc.		
Project:	Nuclear Metals, Inc		
Location:	Concord, MA	Project No:	GTX-312539

Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	TS-6-C_1.6-2.7	Test Date:	11/02/20	Checked By:	bfs
Depth :	1.6-2.7 bgs	Test Id:	585947		

Test Comment: ---
Visual Description: Moist, light yellowish brown silty sand with gravel
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	19.6	68.1	12.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	97		
0.75 in	19.00	95		
0.5 in	12.50	91		
0.375 in	9.50	88		
#4	4.75	80		
#10	2.00	75		
#20	0.85	63		
#40	0.42	44		
#60	0.25	30		
#100	0.15	20		
#140	0.11	15		
#200	0.075	12		

Coefficients

D_{85} = 7.3679 mm | D_{30} = 0.2474 mm
D_{60} = 0.7612 mm | D_{15} = 0.1020 mm
D_{50} = 0.5327 mm | D_{10} = N/A
C_u = N/A | C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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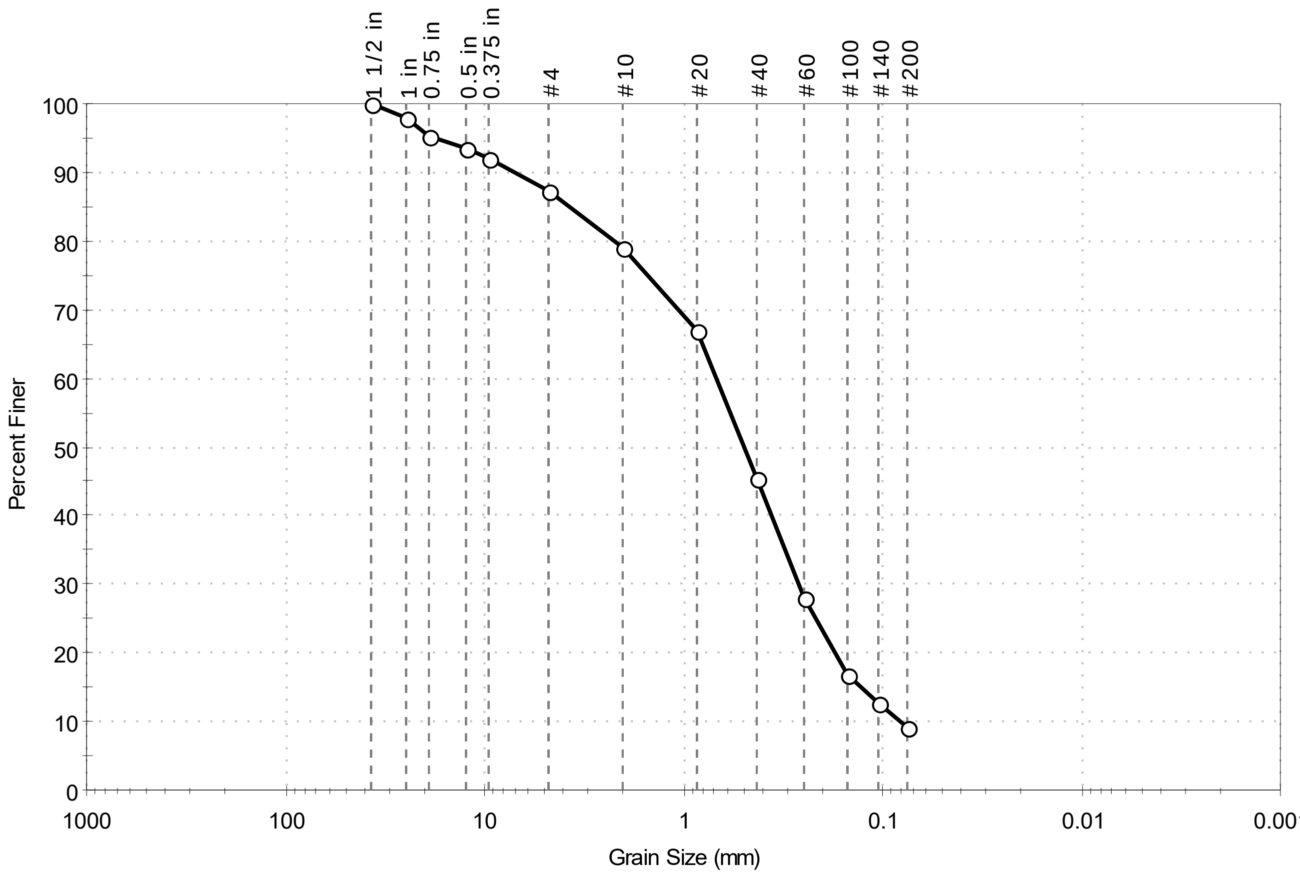
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	TS-7-A_1-3	Test Date:	11/02/20	Checked By:	bfs
Depth :	1-3 bgs	Test Id:	585948		

Test Comment: ---
Visual Description: Moist, olive brown sand with silt
Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	12.6	78.2	9.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	98		
0.75 in	19.00	95		
0.5 in	12.50	94		
0.375 in	9.50	92		
#4	4.75	87		
#10	2.00	79		
#20	0.85	67		
#40	0.42	46		
#60	0.25	28		
#100	0.15	17		
#140	0.11	13		
#200	0.075	9.2		

Coefficients

D_{85} = 3.7137 mm D_{30} = 0.2663 mm
D_{60} = 0.6766 mm D_{15} = 0.1289 mm
D_{50} = 0.4906 mm D_{10} = 0.0815 mm
C_u = 8.302 C_c = 1.286

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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GeoTesting EXPRESS

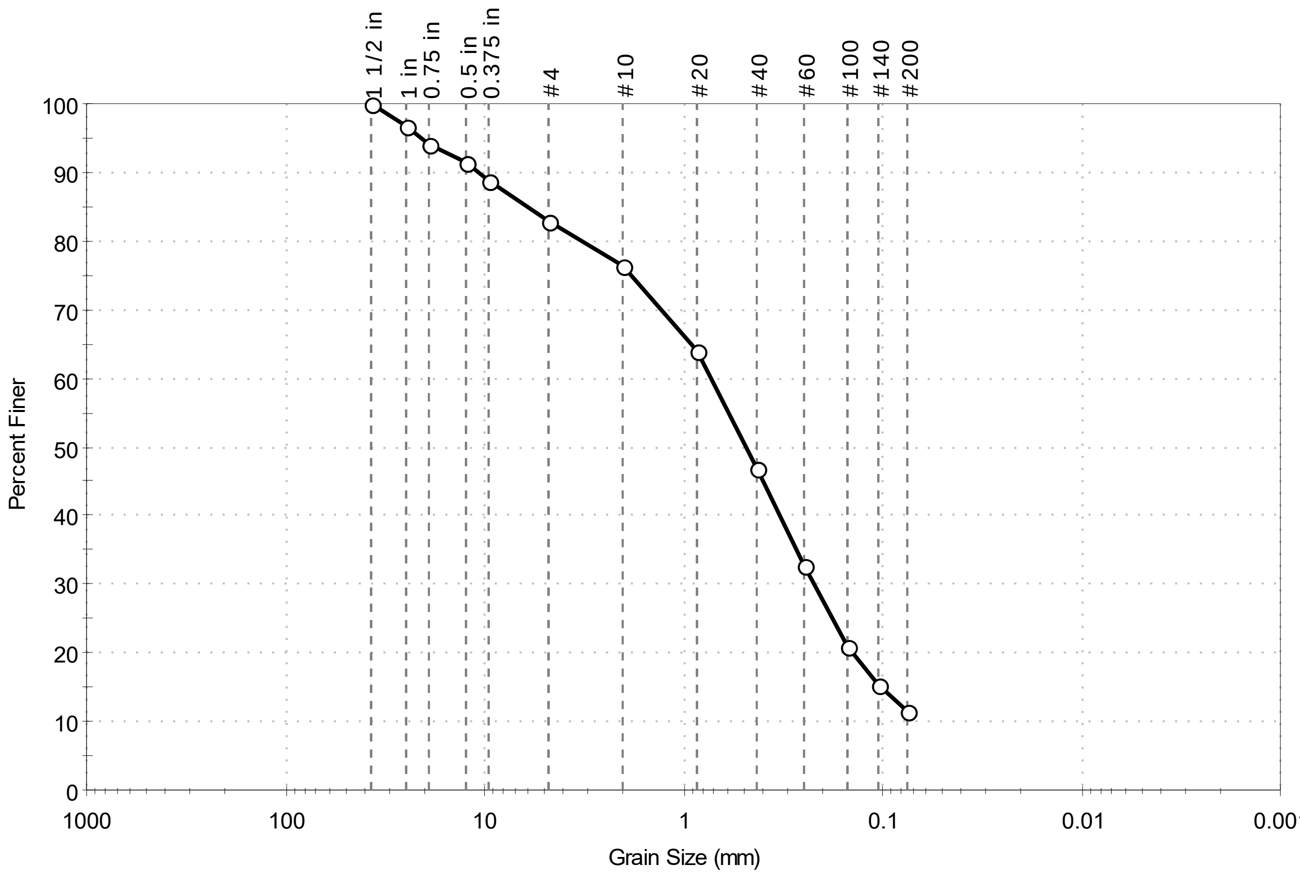
Client:	Haley & Aldrich, Inc.				
Project:	Nuclear Metals, Inc				
Location:	Concord, MA			Project No:	GTX-312539
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	TS-8-C_2-4	Test Date:	11/02/20	Checked By:	bfs
Depth :	2-4 bgs	Test Id:	585949		

Test Comment: ---

Visual Description: Moist, brownish yellow sand with silt and gravel

Sample Comment: ---

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	17.2	71.3	11.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2 in	37.50	100		
1 in	25.00	97		
0.75 in	19.00	94		
0.5 in	12.50	91		
0.375 in	9.50	89		
#4	4.75	83		
#10	2.00	76		
#20	0.85	64		
#40	0.42	47		
#60	0.25	33		
#100	0.15	21		
#140	0.11	15		
#200	0.075	12		

Coefficients

D_{85} =6.1316 mm D_{30} =0.2229 mm

D_{60} =0.7221 mm D_{15} =0.1031 mm

D_{50} =0.4825 mm D_{10} =N/A

C_u =N/A C_c =N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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EXHIBIT HB4-2

Test Pit Logs, Available Test Pit Photos and Gabion Wall Photos

HALEY ALDRICH

TEST PIT LOG

HA21-TP-104

Page 1 of

PROJECT	NMI - Nuclear Metals, Inc.	H&A FILE NO.	131884-003, -004
LOCATION	2229 Main Street, Concord, MA	PROJECT MGR.	M. Kelley
CLIENT	De Maximis, Inc.	FIELD REP	M. Plourde
CONTRACTOR	O+M	DATE	4/21/21
EQUIPMENT	Volvo EC160C track mounted excavator	WEATHER	Clear 60s

Ground El. 186.0 ft. Location See plan

El. Datum NGVD 29 PID Make/Model NA

Groundwater depths/entry rates (in./min.): NA

Depth (ft.)	Sample ID	Stratum Change Depth (ft.)	USCS Symbol	Visual Identification (Color, GROUP NAME & SYMBOL, % oversized, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Toughness	Plasticity	Strength
0	HA21-TP-104-0-6	0.0	SM	Dark brown poorly graded Silty SAND, mps=0.1, no structure, no odor, dry. — TOP SOIL —				25	45	30				
		1.0	SP-SM	Brown poorly graded SAND with silt and gravel, 10% oversized, mps=1.0, no structure, no odor, dry. Large cobbles and stones.	10	5	10	35	25	15				
5				— FILL —										
				BOTTOM OF EXPLORATION 7.0										

Obstructions: NA

Remarks:

Field Tests

Dilatancy: R - Rapid S - Slow N - None

Toughness: L - Low M - Medium H - High

Plasticity: N - Nonplastic L - Low M - Medium H - High

Dry Strength: N - None L - Low M - Medium H - High V - Very High

Standing water in completed pit:
at depth NA ft.
measured after hrs. elapsed

Boulders: Diameter (in.)	Number	Approx. vol. (cu. ft.)
12 to 24	~10	=
over 24	310	=

Test Pit Dimensions (ft.):
Pit Depth 7'
Pit Length X Width 13 x 6

Form 2006

NOTE: Soil identifications based on visual/manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Form 2006 USCS Geo.

HALEY ALDRICH

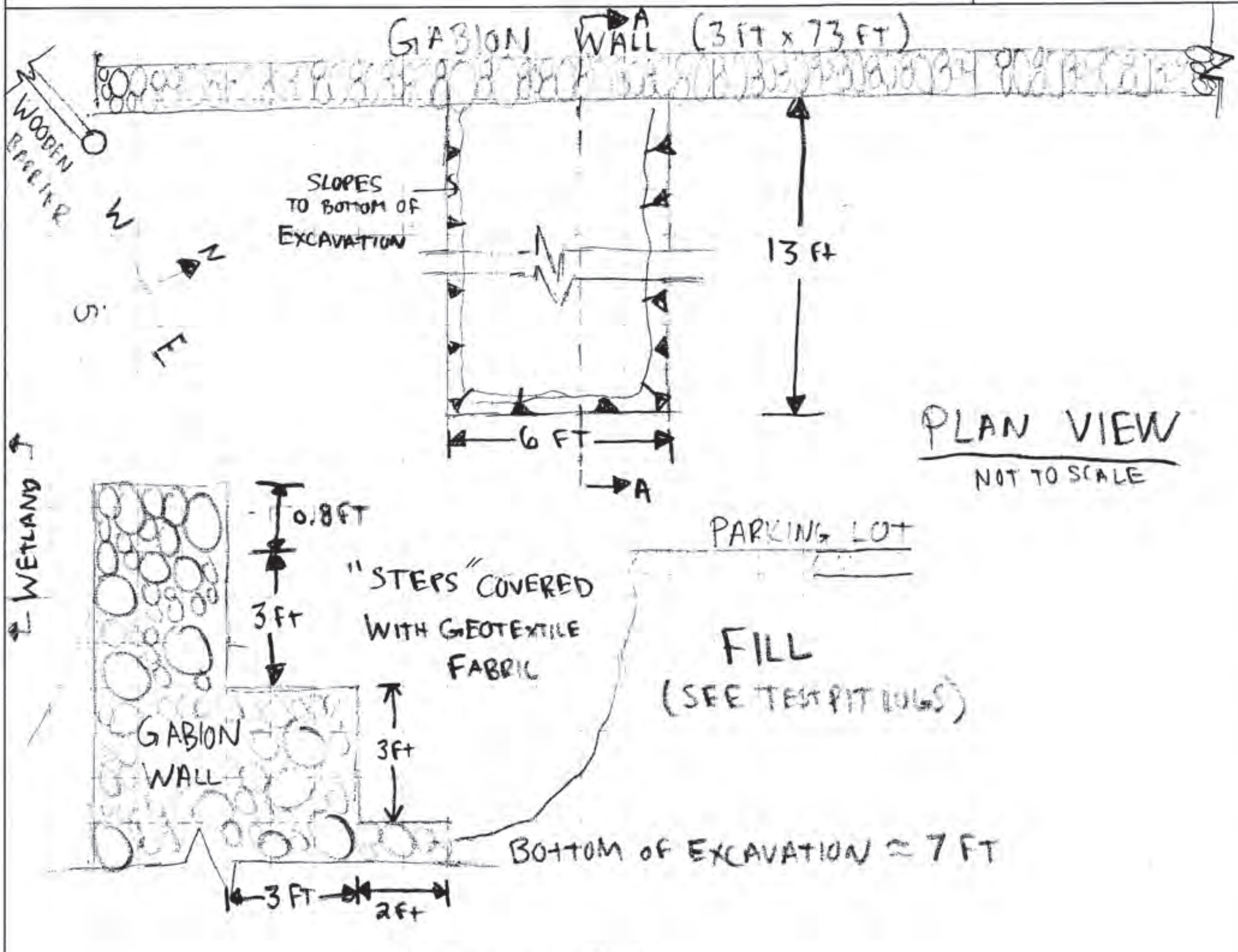
CALCULATIONS

File No.	131884-004
Sheet	1 of 1
Date	4/21/21
Computed By	M. Plourde
Checked By	

Client: de maximis inc

Project: Nuclear Metals Inc (NMI)

Subject: Gabion Wall Test Pit (HA21-TP-104)



SECTION A-A

NOT TO SCALE

NOTE: APPROX. 6 FT OF LANDSCAPING EXTENDS FROM GABION WALL TO EDGE OF PAVEMENT

HALEY ALDRICH

TEST PIT LOG

PROJECT	NMI - Nuclear Metals, Inc.	H&A FILE NO.	131884-003, -004
LOCATION	2229 Main Street, Concord, MA	PROJECT MGR.	M. Kelley
CLIENT	De Maximis, Inc.	FIELD REP	M. Plourde
CONTRACTOR	O+M	DATE	4/22/21
EQUIPMENT	Volvo EC60C track mounted excavator	WEATHER	Clear 40s

Ground El. ______ ft. Location: See plan
El. Datum: NGVD 29 PID Make/Model: 10n Tiger
Groundwater depths/entry rates (in./min.): NA

Depth (ft.)	Sample ID	Stratum Change Depth (ft.)	USCS Symbol	Visual Identification (Color, GROUP NAME & SYMBOL, % oversized, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0		0.0	SP	Brown poorly graded SAND, 1% oversized, mps=1.0, no structure, no odor, dry. Traces of roots, vegetative matter and debris and wood chips. - TOP SOIL/FILL -		10	10	40	30	10				
5		1.5	SP-SM	Brown poorly graded SAND with silt and gravel 10% oversized, mps=1.5, no structure, no odor, dry. - PROCESSED FILL -										
		6.0		BOTTOM OF EXPLORATION 6.0 FT										

Obstructions: NA

Remarks:

Field Tests
Dilatancy: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

Standing water in completed pit:
at depth NA ft.
measured after ______ hrs. elapsed

Boulders:

Diameter (in.)	Number		Approx. vol. (cu. ft.)
12 to 24	~10	=	
over 24	210	=	

Test Pit Dimensions (ft.):
Pit Depth: 6.0
Pit Length X Width: 18x6

NOTE: Soil identifications based on visual/manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY ALDRICH

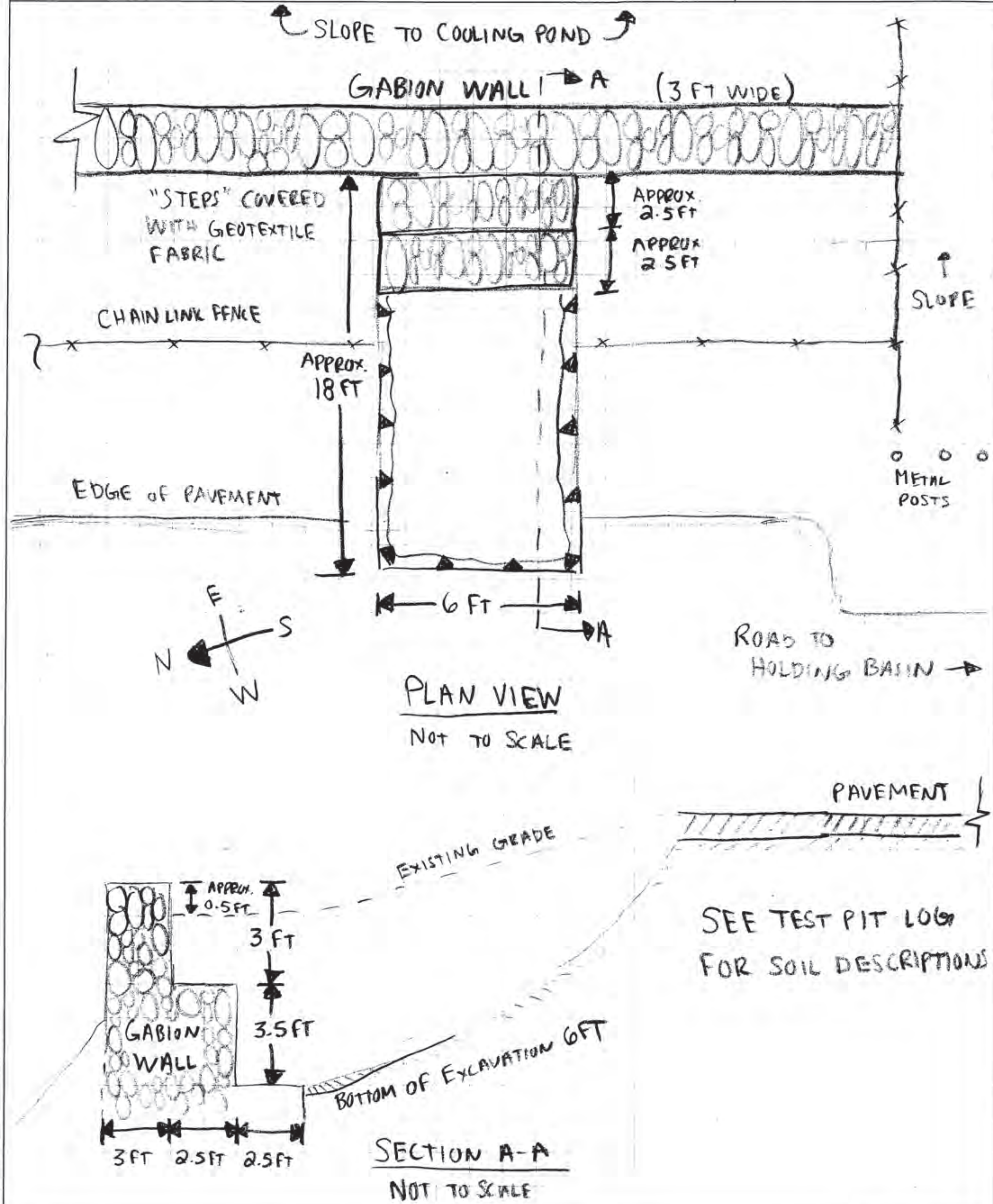
CALCULATIONS

File No.	131884-004
Sheet	1 of 1
Date	4/22/21
Computed By	M. Plourde
Checked By	

Client: de maximis

Project: Nuclear Metals Inc. (NMI)

Subject: Gabion Wall Test Pits (HA21-TP-108)



SEE TEST PIT LOG FOR SOIL DESCRIPTIONS

MMP_HA4x4Calc 8 Jan 2015

HALEY ALDRICH

TEST PIT LOG

HA21-TP-109

Page 1 of

PROJECT	NMI - Nuclear Metals, Inc.	H&A FILE NO.	131884-003, -004
LOCATION	2229 Main Street, Concord, MA	PROJECT MGR.	M. Kelley
CLIENT	De Maximis, Inc.	FIELD REP	M. Plourde
CONTRACTOR	O + M	DATE	4/21/21
EQUIPMENT	Volvo EC160C track mounted excavator	WEATHER	Clear 60s

Ground El. 186.0 ft. Location See plan
El. Datum NGVD29 PID Make/Model 10N Tiger
Groundwater depths/entry rates (in./min.): NA

Depth (ft.)	Sample ID	Stratum Change Depth (ft.)	USCS Symbol	Visual Identification (Color, GROUP NAME & SYMBOL, % oversized, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Toughness	Plasticity	Strength
0	HA21-TP-109 0-9	0.0 0.3		Bituminous Concrete pavement										
			SP-SM	Brown poorly graded SAND with silt and gravel, 10% oversized, MPS=1.0, no structure, no odor, dry. Large cobbles and stone.	10	5	10	35	25	15				
5				- PROCESSED FILL -										
		9.0												
10				BOTTOM OF EXCAVATION 9.0 FT										

Obstructions: N/A

Remarks:

Field Tests
Dilatancy: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

Standing water in completed pit:
at depth N/A ft.
measured after hrs. elapsed

Boulders: Diameter (in.)	Number		Approx. vol. (cu. ft.)
12 to 24	~10	=	
over 24	≥10	=	

Test Pit Dimensions (ft.):
Pit Depth 9 ft
Pit Length X Width 16.5x6

NOTE: Soil identifications based on visual/manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

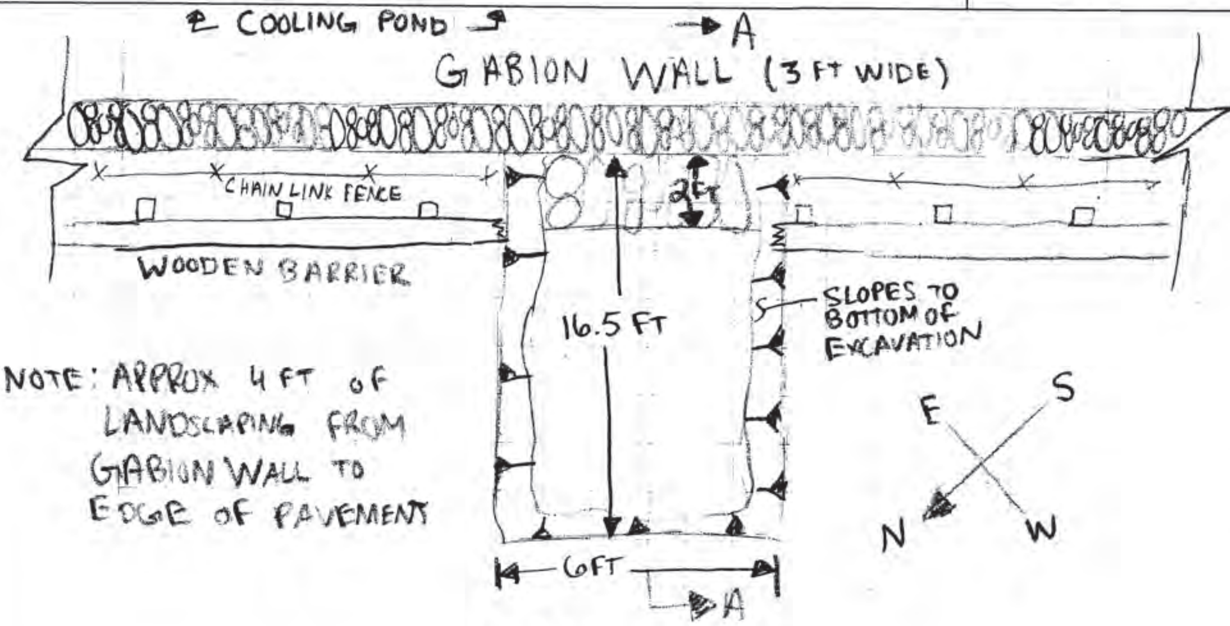
Form 2006

Form 2006 USCS Geo

HALEY ALDRICH

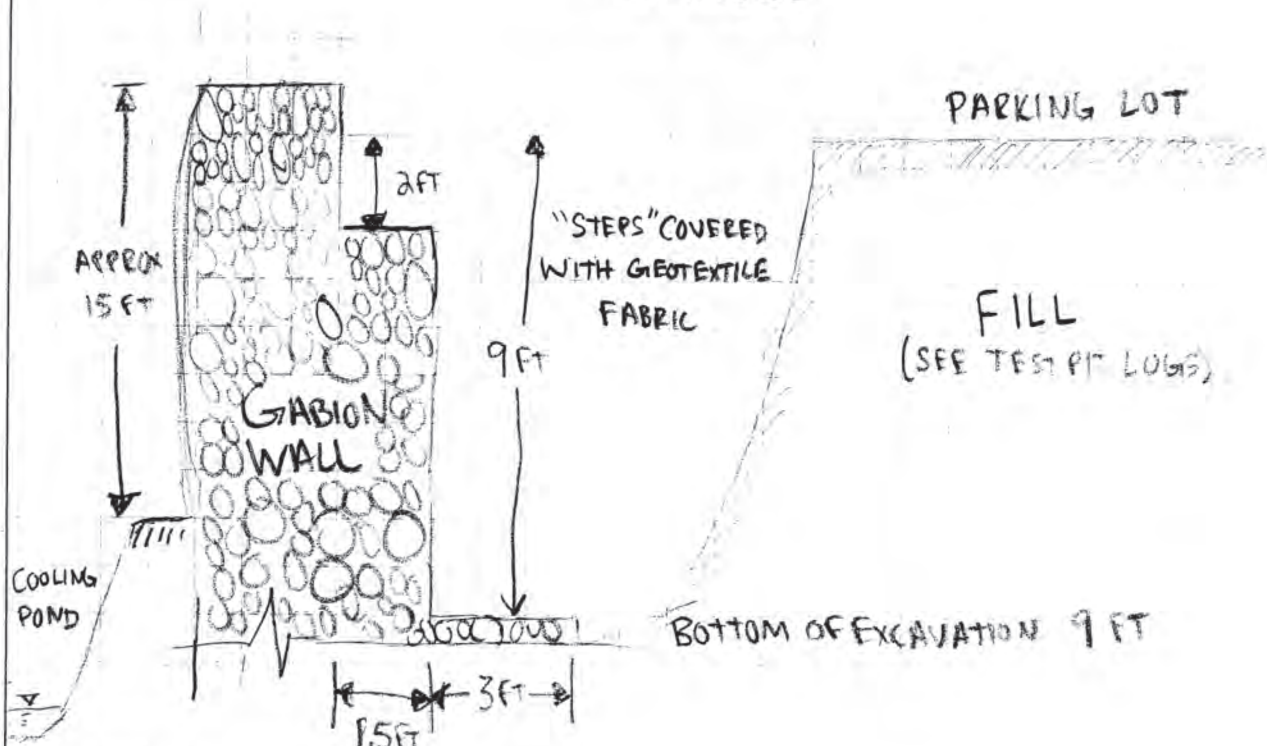
CALCULATIONS

Client	de maximis inc
Project	Nuclear Metals Inc (NMI)
Subject	Gabion Wall Test Pit (HA21-TP-109)
File No.	131884-004
Sheet	1 of 1
Date	4/21/21
Computed By	M Plourde
Checked By	



PLAN VIEW

NOT TO SCALE



NOTE: GABION WALL BOWS TOWARDS COOLING POND

SECTION A-A

NOT TO SCALE

Photo 1: Gabion Wall Test Pit: April 2021

Photo 2: Gabion Wall Test Pit: April 2021

Photo 3: Gabion Wall and Cooling Pond: April 2021

Photo 4: Gabion Wall Test Pit: April 2021

Photo 5: Gabion Wall Test Pit: April 2021

Photo 6: Gabion Wall Test Pit: April 2021

Photo 7: Gabion Wall Test Pit: April 2021

Photo 8: Gabion Wall May 2021

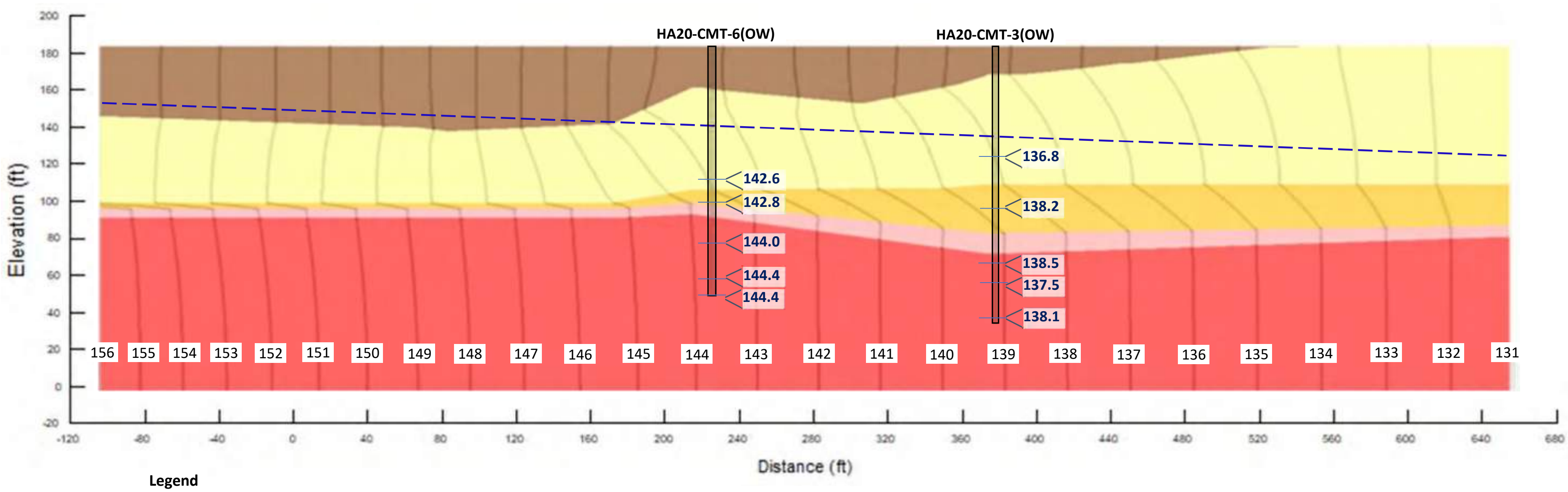
Photo 9: Gabion Wall and Cooling Pond August 2022

Photo 10: Gabion Wall and Cooling Pond: August 2022

Photo 11: Gabion Wall August 2022

EXHIBIT HB4-3

Example of Selected Slope Stability Analysis



Legend

144.0 CMT Channel Groundwater Elevations collected March 2021

Simulated Water Table Surface

Simulated Groundwater Flow Contours

Fill:
Simulated Hydraulic Conductivity 1.0 x 10^{-3} cm/sec

Ice Contact Deposits:
Simulated Hydraulic Conductivity 1.0 x 10^{-2} cm/sec

Glacial Till:
Simulated Hydraulic Conductivity 1.0 x 10^{-5} cm/sec

Weathered Bedrock:
Simulated Hydraulic Conductivity 7.4 x 10^{-5} cm/sec

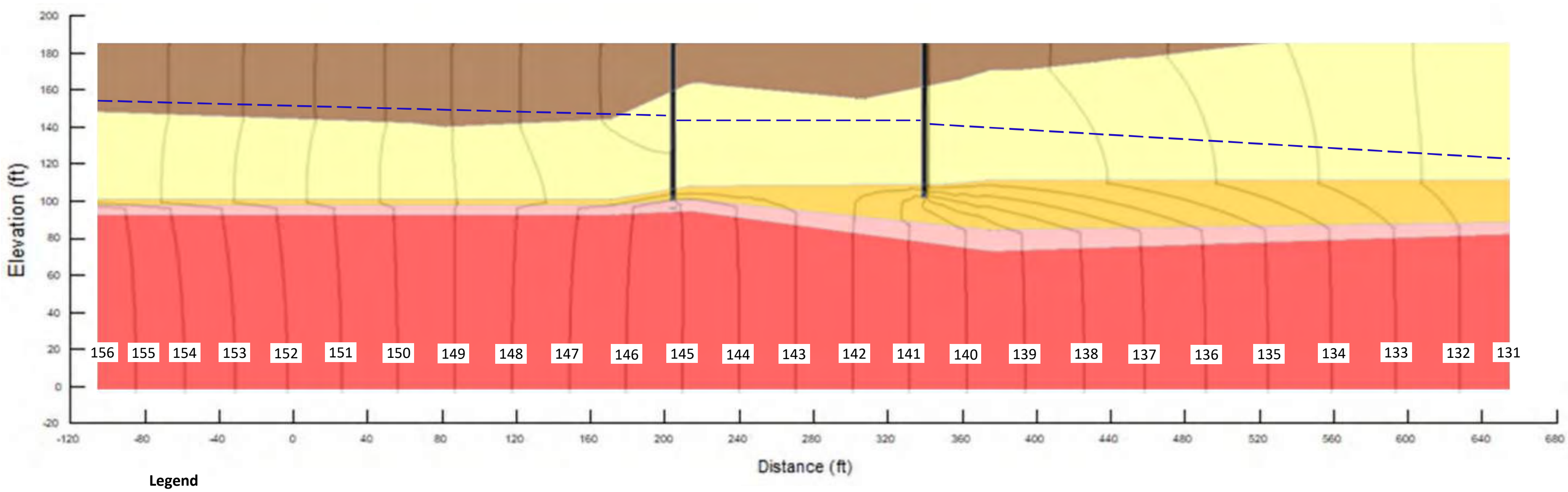
Competent Bedrock:
Simulated Hydraulic Conductivity 3.9 x 10^{-5} cm/sec

Slurry Wall:
Simulated Hydraulic Conductivity 1.0 x 10^{-7} cm/sec

HALEY ALDRICH
Nuclear Metals Inc.
Concord, Massachusetts

Current Site Conditions

April 2022



Legend

Simulated Water Table Surface

Simulated Groundwater Flow Contours

Fill:
Simulated Hydraulic Conductivity 1.0 x 10^{-3} cm/sec

Ice Contact Deposits:
Simulated Hydraulic Conductivity 1.0 x 10^{-2} cm/sec

Glacial Till:
Simulated Hydraulic Conductivity 1.0 x 10^{-5} cm/sec

Weathered Bedrock:
Simulated Hydraulic Conductivity 7.4 x 10^{-5} cm/sec

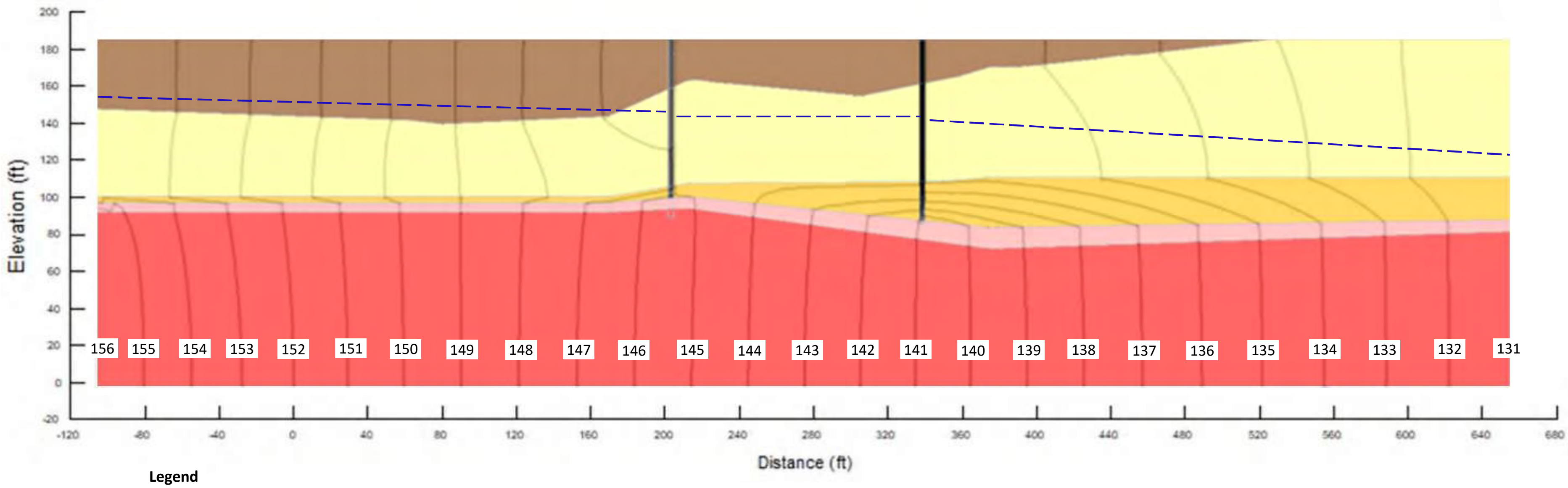
Competent Bedrock:
Simulated Hydraulic Conductivity 3.9 x 10^{-5} cm/sec

Slurry Wall:
Simulated Hydraulic Conductivity 1.0 x 10^{-7} cm/sec

HALEY ALDRICH
Nuclear Metals Inc.
Concord, Massachusetts

Shallow Wall
(5 ft Till Embedment)
3 Ft Wall Thickness

April 2022



Legend

- - - Simulated Water Table Surface

— Simulated Groundwater Flow Contours

Fill: Simulated Hydraulic Conductivity 1.0 x 10^{-3} cm/sec

Ice Contact Deposits: Simulated Hydraulic Conductivity 1.0 x 10^{-2} cm/sec

Glacial Till: Simulated Hydraulic Conductivity 1.0 x 10^{-5} cm/sec

Weathered Bedrock: Simulated Hydraulic Conductivity 7.4 x 10^{-5} cm/sec

Competent Bedrock: Simulated Hydraulic Conductivity 3.9 x 10^{-5} cm/sec

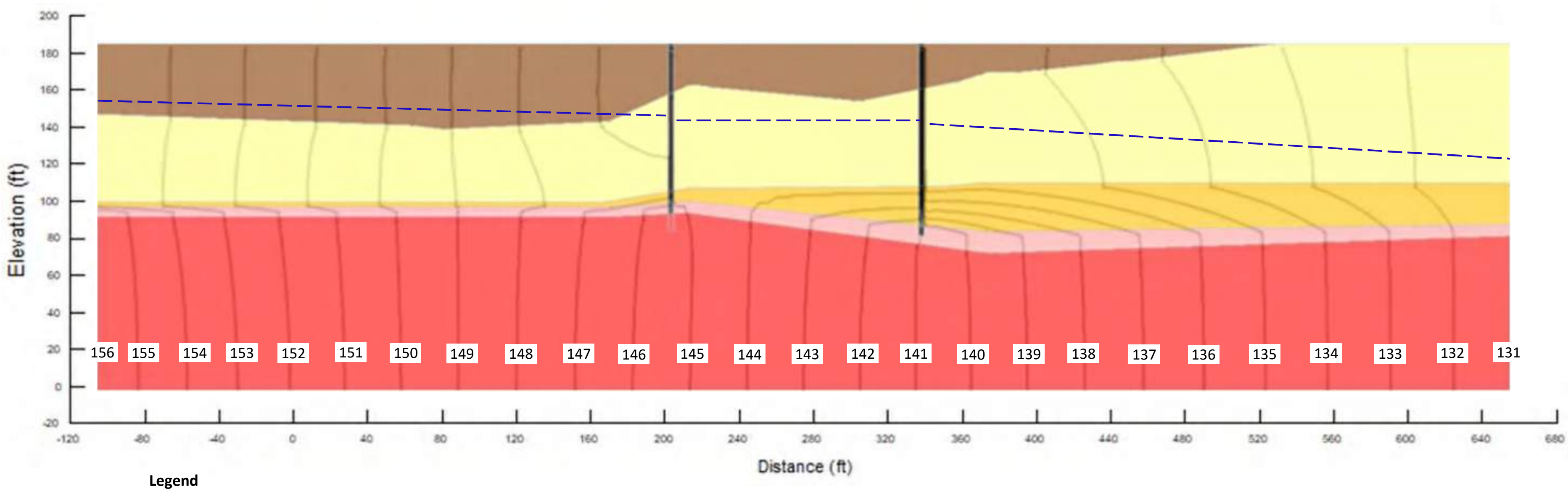
Slurry Wall: Simulated Hydraulic Conductivity 1.0 x 10^{-7} cm/sec

HALEY ALDRICH

Nuclear Metals Inc.
Concord, Massachusetts

Intermediate Wall
(10 ft Till Embedment)
3 Ft Wall Thickness

April 2022



Legend

- Simulated Water Table Surface
- Simulated Groundwater Flow Contours
- Fill: Simulated Hydraulic Conductivity 1.0 x 10^{-3} cm/sec
- Ice Contact Deposits: Simulated Hydraulic Conductivity 1.0 x 10^{-2} cm/sec
- Glacial Till: Simulated Hydraulic Conductivity 1.0 x 10^{-5} cm/sec
- Weathered Bedrock: Simulated Hydraulic Conductivity 7.4 x 10^{-5} cm/sec
- Competent Bedrock: Simulated Hydraulic Conductivity 3.9 x 10^{-5} cm/sec
- Slurry Wall: Simulated Hydraulic Conductivity 1.0 x 10^{-7} cm/sec

HALEY ALDRICH

Nuclear Metals Inc.
Concord, Massachusetts

Deep Wall
(5 ft Rock Embedment)
3 Ft Wall Thickness

April 2022

APPENDIX E

HB-5 – Seepage Analysis for Containment Wall Design

PDI HB-5: Seepage Analysis to Evaluate Hydraulic Properties of Wall and Depth of Wall

1 Scope of Work

The purpose of this Pre-Design Investigation (PDI) was to evaluate the seepage of groundwater under and through the proposed containment wall, a component of the prescribed remedy for the holding basin (HB) outlined in the Record of Decision (ROD). Activities performed in accordance with the HB PDI Work Plan (Work Plan) to meet the objectives of this PDI include:

AREA OF INVESTIGATION	PDI OBJECTIVES	PDI SCOPE
Holding Basin	Complete seepage analysis to evaluate hydraulic properties of wall and determine depth of wall.	• Setup SEEP/w (SEEPage for Windows) model with overburden and bedrock aquifer geometry using hydraulic conductivity values from Geosyntec calibrated groundwater flow model as well as data gathered in PDIs HB-1 and HB-4. • Conduct parametric seepage modelling on proposed wall depths and wall hydraulic conductivity to refine design parameters of containment wall.

By completing the outlined scope of work, Haley & Aldrich, Inc. (Haley & Aldrich) was able to conduct a parametric seepage analysis, using a finite element seepage model completed with SEEP/w software, to assess seepage potential within the overburden and bedrock aquifers. The results of the initial model run indicated design parameters for hydraulic and physical properties of the proposed HB wall, including hydraulic conductivity, depth (into till or bedrock), and thickness. The initial model runs completed as part of the PDI are presented herein, and as the design develops the input parameters and geometry of the wall will be adjusted in the model accordingly.

2 Summary of Work

2.1 DEVELOPMENT OF SEEP/W MODEL

A finite element, 3-dimensional model of the site was developed using the SEEP/w software from Geoslope. SEEP/w is a numerical modeling software which allows the user to simulate groundwater flow in cross section. A total of two (2) critical seepage sections were evaluated and transient parametric analyses performed to estimate the minimum wall construction parameters to meet performance criteria.

The data collected from PDI activities described in HB-1 and HB-4 (Appendices A and D of the HB Summary Report), data recently collected by Geosyntec as part of the site-wide bedrock groundwater characterization, and data collected during the remedial investigation (RI) were all used to construct the model. The following site-specific information collected from the other HB PDIs were input into SEEP/w to develop a 3-dimensional model representative of site conditions.

Parameter	PDI
Subsurface Geology: • Stratigraphic Sequence • Depth to Bedrock	HB-1, HB-4

Parameter	PDI
Aquifer Properties (Bedrock and Overburden): • Hydraulic Conductivity • Saturated Thickness	HB-1
Geophysical Properties: • Location of Water Bearing Fractures • Orientation of fractures	HB-1

3 Deviations from Work Plan

The Work Plan included using a 2-dimensional version of the SEEP/w model. However, the 3-dimensional model provided more representative groundwater flow toward and under the HB under static and post-containment wall conditions. The 2-dimensional model is a cross-sectional flow model and does not take into consideration the natural gradient of the groundwater flow system. In contrast, the 3-dimensional model allowed for the groundwater flow toward the HB to be deflected by the containment wall being present within the flow path, which was more representative of the actual groundwater conditions. The simulated sections and wall embedment included only 1-scenario of wall embedment into the bedrock. This is due to the glacial till layer being thicker than anticipated and providing adequate cutoff without embedding the wall deeper into bedrock.

4 Results

4.1 SEEPAGE ANALYSIS

Once the model was developed, a series of iterations were run to simulate groundwater flow in cross sections of the site under different conditions, adjusted by inputting and changing the model parameters. A range of practical design parameters were parametrically adjusted to alternate containment wall designs. The results included herein provide a summary of various model runs completed as part of the PDI work. Additional model runs will be conducted as part of the 30% Remedial Design (RD). Figure 7 (included as an attachment to the *HB Summary Report*) shows the three (3) primary scenarios evaluated for the wall embedment depths.

Below is a summary of the expected ranges for the design parameters.

Wall Design Parameter	Expected Range
Hydraulic Conductivity	$1x10^{-8}$ to $1x10^{-6}$ cm/sec
Wall depth (Embedment into till or rock)	80 feet (5 to 10 ft into till) to 100 ft (5 ft into bedrock)
Thickness	2 to 4 ft

Note:
cm/sec - centimeter per second

The results of the seepage modelling are intended to be used to evaluate the design parameters of the HB containment wall.

4.2 SEEPAGE FLUX CALCULATIONS

The first step in the analysis was to develop a calibrated model using groundwater elevations measured in observation wells (OWs) and continuous multi-level tubes (CMTs) installed as part of the HB-1 PDI. Details of the model set up and calibration are included in Exhibit HB5-1. Model calibration consisted of matching simulated hydraulic head contours to groundwater elevations collected in CMT channels HA20-CMT-6 and HA20-CMT-3. Four model scenarios were evaluated in this analysis to simulate current site conditions and future embedment scenarios:

- **Current conditions**: Present day groundwater flow conditions without the containment wall or low permeability cap above the holding basin footprint.
- **Shallow wall embedment**: Containment wall embedment 5 ft into glacial till. A low permeability cap is present above the holding basin footprint and assigned 5% of the overall site recharge or 0.6 inches/year.
- **Intermediate wall embedment**: Containment wall embedment 10 ft into glacial till or to the top of bedrock. A low permeability cap is present above the holding basin footprint and assigned 5% of the overall site recharge or 0.6 inches/year.
- **Deep wall embedment**: Containment wall embedment 5 ft into bedrock. A low permeability cap is present above the holding basin footprint and assigned 5% of the overall site recharge or 0.6 inches/year.

The proposed containment wall footprint geometry was used to assign finite-element subdomain geometry that represents the portion of the ice contact deposit aquifer within the holding basin. This subdomain geometry was used for mass balance calculations of flow into and out of the ice-contact deposits. The steady-state seepage model simulation calculated the flux of water into the top domain of the holding basin footprint and flux out of the holding basin footprint horizontally through the ice-contact deposits under current conditions. The future condition model simulations included calculating the flux through the containment wall, and vertical flow out of the footprint through the underlying glacial till and bedrock. A simplified equation for this calculation is as follows:

$$\textbf{Flow into Holding Basin} - \textbf{Flow out of Holding Basin} = \sim\mathbf{0} \qquad \text{(Equation 1)}$$

Where:

Flow into Holding Basin: Charge into subdomain geometry vertically from ground surface and horizontal upgradient flow contributions through ice contact deposits and underlying glacial till and bedrock (current conditions) or containment wall (future condition).

Flow out of Holding Basin: Groundwater migration coming out of subdomain geometry horizontally through ice contact deposits (current conditions) or containment wall (future condition) or vertically through the underlying glacial till and bedrock (future condition).

For this analysis, the model calculation included the groundwater discharge rate in ft^3/day within the ice contact deposits with no wall present to represent existing conditions of groundwater migration from the HB. By increasing embedment depth of the simulated containment wall, the presence of the containment wall modified the hydraulic head contours to create a greater flow pathway out of the HB, influencing groundwater flow to migrate deeper beneath the toe of the wall, and decreasing the overall groundwater discharge rate.

The table below shows the various scenarios of the containment wall embedment depths modeled during this PDI, and the percent discharge reduction when compared to the current site conditions seepage flux from the ice contact deposit.

Embedment Scenario	Seepage Flux out of Holding Basin Domain	Percent Discharge Reduction from Current Conditions
Current conditions	6432 ft^3/day or 33.4 GPM	N/A
Shallow Wall (5 ft into Till)	2.60 ft^3/day or 0.0135 GPM	99.959%
Intermediate Wall (10 ft into Till)	2.47 ft^3/day or 0.0128 GPM	99.961%
Deep Wall (5 ft into rock)	2.42 ft^3/day or 0.0126 GPM	99.962%

Note:
GPM – gallons per minute

Seepage model results estimated that the reduction in flow out of the holding basin will decrease by greater than three orders of magnitude for all proposed containment wall embedment scenarios. Model results suggested a significant containment wall influence on the hydraulic head gradient when compared to current site conditions. As a result, the relative difference in flow rate between the three embedment scenarios is inconsequential.

4.3 MASS FLUX OF DEPLETED URANIUM FROM HOLDING BASIN

Per the ROD, the HB wall will need to be designed to mitigate the migration of groundwater containing depleted uranium (DU) flowing out of the basin for a minimum of 200 years and, to the extent reasonably achievable, for 1,000 years, which requires an analyses of mass flux as part of the design. To determine the flux of DU out of the HB under varying containment wall embedment depth scenarios, a mass flux calculation is included below using the seepage model flux and the existing DU concentration within the HB for the existing condition. The future flux includes the containment wall and a prediction of mass flux with no In-Situ Stabilization (ISS) and mass flux with ISS completed within the HB as outlined in the ROD. The proposed ISS will result in a reduction of DU available to be transported in groundwater. The following equation was used to determine the mass flux under the different modelled scenarios:

$$C^{*}S_x = C_x \qquad \text{(Equation 2)}$$

Where:
C_x = Aqueous concentration flux, gram/year
S_x = Seepage model flux, ft^3/year
C = Aqueous concentration, gram/ft^3

Note:

1. µg/L * 1.0E-09 = gram/cm^3
2. gram/cm^3 * 28,316.85 = gram/ft^3

Equation 2 above describes the mass balance relationship between groundwater discharge out of the holding basin footprint and aqueous concentration of DU. By assuming conservative transport of DU with groundwater flow, calculated seepage model flux out of the holding basin can be multiplied by the aqueous concentration of DU currently observed in holding basin observation wells, and future concentrations after proposed ISS reduction, to calculate percent aqueous mass reduction. The calculation detail is included in Exhibit HB5-1 and the results are summarized below.

Scenario	Aqueous Concentration Flux out of Holding Basin Domain (grams/year)	Percent Reduction from Current Conditions
Current conditions	205,000	N/A
Shallow Wall (5 ft into Till)	82.94	99.95958%
Intermediate Wall (10 ft into Till)	78.80	99.96160%
Deep Wall (5 ft into rock)	77.20	99.96238%
Shallow Wall Post ISS	1.66	99.99919%
Intermediate Wall Post ISS	1.58	99.99923%
Deep Wall Post ISS	1.54	99.99925%

Note:

1. Aqueous concentration of DU at location HB-13 (3,086.5 µg/L) used in analysis.
2. Post ISS condition assumes 98% reduction in DU within holding basin or to 61.73 µg/L.

Based on the mass flux calculation above, the containment wall embedment in glacial till or 5 ft into bedrock without any ISS completed provides a reduction of 99.96% mass flux of DU migration from the HB.

4.4 MODEL SENSITIVTY ANALYSES

A sensitivity evaluation was performed to assess the influence of four hydraulic parameters on the magnitude of seepage flux out of the holding basin. To determine if the evaluated hydraulic parameter results in observable model sensitivity, the seepage flux out of the holding basin domain is compared to the Base Case model for the current condition scenario before implementation of the containment wall, and all three embedment scenarios. For sensitivity adjustments that result in greater than 5% change from the Base Case Model runs, the parameter is considered sensitive. The following modeling parameters were adjusted as part of the sensitivity analysis:

Description	Base Case Model Value	Sensitivity Analysis Model Value
Ice Contact Deposit Hydraulic Conductivity	1.0E-02 cm/sec	5.0E-03 cm/sec 1.0E-03 cm/sec
Ice Contact Deposit Anistropy	0.1	1.0
Glacial Till Hydraulic Conductivity	1.0E-05 cm/sec	1.0E-04 cm/sec 1.0E-05 cm/sec
Slurry Wall Hydraulic Conductivity	1.0E-07 cm/sec	1.0E-06 cm/sec 1.0E-08 cm/sec

The first parameter evaluated is the hydraulic conductivity of the ice contact deposit. In-situ testing performed within overburden wells at the Site by Geosyntec Consultants, published in their Remedial Investigation report suggests the hydraulic conductivity of the ice contact deposit varies several orders of magnitude, with a geometric mean hydraulic conductivity of 3.98 ft/day or 1.4E-03 cm/sec. To determine model sensitivity to ice contact deposit hydraulic conductivity, we adjusted the hydraulic conductivity from the base model value of 1.0E-02 cm/sec to 5.0E-03 cm/sec and 1.0E-03 cm/sec. The analysis demonstrated that the seepage flux through the holding basin domain is sensitive to the ice contact deposit hydraulic conductivity during the current condition, or before the implementation of the containment wall. Decreasing the hydraulic conductivity by one order of magnitude results in an 89% decrease in seepage flux out of the holding basin, and a 49% decrease in seepage flux when reducing hydraulic conductivity by half an order of magnitude. For embedment scenarios the model was not sensitive to reducing the ice contact deposit hydraulic conductivity, with less than a 2% change in seepage flux across the three embedment scenarios and two hydraulic conductivity runs. The anisotropy, or vertical hydraulic conductivity to horizontal hydraulic conductivity ratio of the ice contact deposits was altered from the base case parameter value of 0.1 to 1.0 or setting the vertical and hydraulic conductivity values equal. The model results suggest there is slight sensitivity to this parameter in the current condition, increasing the seepage flux out of the holding basin domain by 5%, but is not sensitive during the containment wall embedment scenarios.

The analysis demonstrated that increasing the glacial till hydraulic conductivity by up to one order of magnitude results in no change to the seepage flux under the current condition, and approximately 1% change to the seepage flux under the three embedment scenarios. This scenario is representative of zones where the glacial till may be more granular or not as tightly bonded.

The final parameter for the model sensitivity evaluation is the simulated hydraulic conductivity of the containment wall. The expected design parameter range for the containment wall hydraulic conductivity is between 1.0E-06 to 1.0E-08 cm/sec. As part of the sensitivity evaluation, hydraulic conductivity of the containment wall was adjusted +/- one order of magnitude to determine if model results are sensitive to the design parameter range. Increasing the containment wall hydraulic conductivity one order of magnitude to 1.0E-06 cm/sec results in approximately a 37% increase in flux out of the holding basin domain for the shallow embedment scenario, a 12% increase in flux for the intermediate scenario, and less than 2% increase for the deep scenario. For the case in which the containment wall hydraulic conductivity is decreased an order of magnitude to 1.0E-08 cm/sec, the simulated seepage flux out of the holding basin domain will decrease 5% for the shallow embedment scenario, and 10% for the intermediate and deep embedment scenarios. Although the seepage model is sensitive to the containment wall hydraulic conductivity, it is worth noting that for the 1.0E-06 cm/sec wall simulations, the reduction in flow rate from current conditions is still three orders of magnitude for the shallow embedment scenario, or a decrease from approximately 6,432 ft^3/day to 3.58 ft^3/day.

The model sensitivity analysis results table is included in Exhibit HB5-1.

5 Summary of Future Design Considerations

As part of the 30% RD, additional geologic sections through the HB will be evaluated to consider the design of the containment wall to be toed into glacial till or bedrock. Under conditions where the till thickness is over 10 ft thick the wall will be evaluated to be 5 ft. and 10 ft. into glacial till. When the till thickness is less than 10 ft., the containment wall will extend 5 ft into bedrock. Various parameters to the model will be adjusted to evaluate the model sensitivity. As the design progresses, the following may be included with design refinements:

- Calculation of a relationship between K_h and K_v for the rock based on dip data. After calculating the corrected average dip, that value could be used to estimate the relationship between K_h and K_v.
- Adjustment of bedrock and glacial till anisotropy to refine the calibration of the model, and to see if the model is sensitive to these changes.
- Evaluation of vertical fractures in the bedrock as part of the bedrock hydraulic conductivity sensitivity analyses. The bedrock fracture dip angles will be tabulated for the borings completed along the wall alignment and site-wide data will be compiled for comparison. An average dip angle will be used for a near vertical fracture set through the rock within the footprint of the wall to evaluate the potential flux of DU through a set of vertical fractures below the wall.
- Simulation of additional holding basin cross sections to determine model sensitivity to stratigraphic unit geometry.
- Coordination with Geosyntec on the ISS attenuation of DU and adjustment of the % reduction in DU concentration within the HB. The current assumption is the ISS reduces the DU concentration by 98%. However, the net effect of the ISS is relatively minor as compared to the effect the containment wall has on the migration of DU from the HB.
- Development of a design-phase exploration program consisting of drilling test borings along the wall alignment to determine the toe embedment elevation of the containment wall around the entire HB. The toe of the containment wall may be mostly in glacial till other than areas where the till thickness is thinner. These portions of the wall will extend a minimum depth into bedrock to be determined by this drilling program.

ATTACHMENTS

EXHIBITS

Exhibit HB5-1: 3D Seepage Analysis and Simulated Seepage Flux Estimates

EXHIBIT HB5-1

3D Seepage Analysis and Simulated Seepage Flux Estimates

HALEY ALDRICH	CALCULATIONS	File No.:	131884-003
		Sheet:	1 of 3
Client:	de maximis, inc.	Date:	16-Sep-2022
Project:	Nuclear Metals, Inc.	Computed by:	SHL
Subject:	3D Seepage Analysis and Seepage Flux Estimates	Checked by:	MDK

PROBLEM STATEMENT & OBJECTIVE

1. Calculate total flow under and through the proposed Holding Basin containment wall at the Nuclear Metals, Inc. site using the seepage program SEEP/w 3D package.
2. Estimate groundwater seepage flux out of the Holding Basin for different wall embedment scenarios.

REFERENCES

1. Anderson, M. P. (1979). “Using models to simulate the movement ofcontaminants through groundwater flow systems,” CRC Critical Rev.Environ. Control 9(2), 97-156.
2. Driscoll, F.G., 1986. Groundwater and Wells (2nd ed.), Johnson Filtration Systems, Inc., St. Paul, Minnesota, 1089p.
3. Geostudio 2021.3 SEEP 3D version 11.2.0.22838
4. Zheng, C., and Bennett, G. D. (1995). Applied contaminant transport modeling:Theory and practice, John Wiley and Sons, New York.

AVAILABLE INFORMATION

1. Geosyntec July 2021 groundwater concentration data and cross sections.
2. Haley & Aldrich completed Holding Basin boring logs included in Appendix A Exhibit HB-1-1.
3. Haley & Aldrich completed Holding Basin pumping tests included in Appendix A Exhibit HB-1-5.
4. Haley & Aldrich Holding Basin Cross Sections included in Figures 2 through 7.
5. Report titled "Overburden Hydrogeology and Distribution of Depleted Uranium in Groundwater, Summary from the Remedial Investigation Report (Volume 1), Nuclear Metals, Inc. Superfund Site Concord, Massachusetts" prepared by Geosyntec consultants, dated July 2011.
6. Attachment A titled "Depleted Uranium Fate and Transport Model, Nuclear Metals, Inc. Superfund Site Concord, Massachusetts" prepared by Geosyntec consultants, dated January 2012.
7. Presentation titled "DRAFT Bedrock Groundwater Conceptual Model Update, Nuclear Metals Superfund Site" prepared by Geosyntec consultants dated October 2021.

ASSUMPTIONS

1. All scenarios assume steady state seepage analysis.
2. Groundwater elevation within the modeled cross section varies between El. 154 and El. 131.
3. Aquifer has infinite areal extent
4. Bedrock fracture dip angle assigned a value of 42.0 degrees based on Geosyntec's geometric mean value.
5. Overburden hydraulic gradient assumed to be 0.003 based on Geosyntec's value in "Attachment A Site Specific Uranium Transport Studies"
6. Vertical gradient from the bottom of the Ice Contact Deposit underneath the wall and back to the Ice Contact Deposit was calculated by dividing the change in head over the distance between each stratigraphic layer along the simulated flow pathline.

BOUNDARY CONDITIONS

1. A constant head boundary condition is set along the vertical edge of the eastern and western model domain, set to groundwater elevation 154 to 152 at the left domain and elevation 131 to the right domain. This value is based on approximate calibration to observed heads in CMT channels HA210-CMT-6 and HA20-CMT-3 collected in March 2021.
2. A recharge boundary condition is assigned to the top of the model domain representing 12 inches/year of groundwater recharge to the aquifer. For model runs simulating the holding basin, recharge above the holding basin is assigned 5% of the overal site recharge or 0.6 inches/year to represent the cap consisting of a low permeability liner.

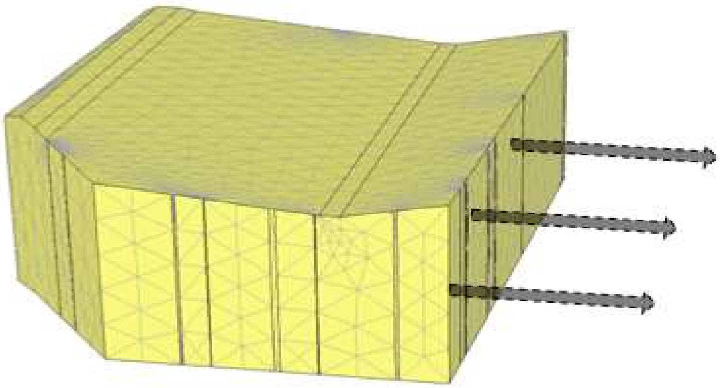
MATERIAL PROPERTIES

Modeled Material	Hydraulic Conductivity (cm/sec)	Anisotropy Kz'/Kx'	Saturated Volume Water Content (ft3/ft3)
Urban Fill	$1.0\text{x}10^{-3}$	1.0	0.3
Ice Contact Deposits	$1.0\text{x}10^{-2}$	0.1	0.3
Glacial Till	$1.0\text{x}10^{-5}$	0.1	0.4
Weathered Bedrock	$7.4\text{x}10^{-5}$	1.0	0.1
Bedrock	$3.9\text{x}10^{-5}$	1.0	0.1
Slurry Wall	$1.0\text{x}10^{-7}$	-	-

SEE PAGE 2 FOR SEEPAGE FLUX ESTIMATES AND WALL EMBEDMENT PERCENT DISCHARGE REDUCTION RATIOS

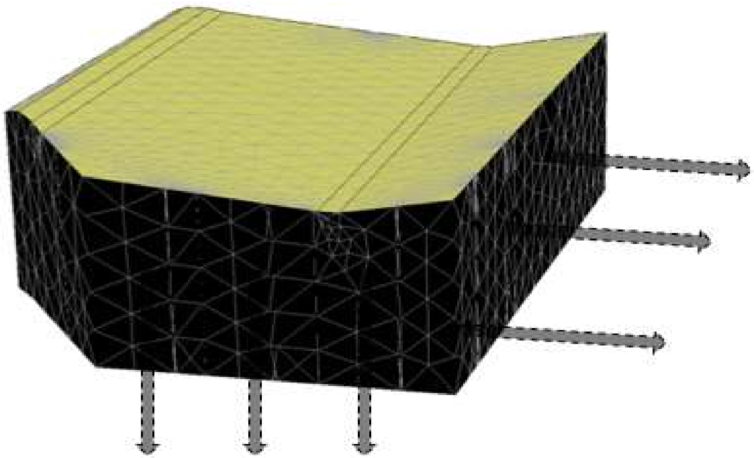
HALEY ALDRICH	SIMULATED SEEPAGE FLUX ESTIMATES	File No.:	131884-003
		Sheet:	2 of 3
Client:	de maximis, inc.	Date:	16-Sep-2022
Project:	Nuclear Metals, Inc.	Computed by:	SHL
Subject:	3D Seepage Analysis and Seepage Flux Estimates	Checked by:	MDK

Current Conditions, Proposed Holding Basin Footprint



Embedment Scenario	Seepage Flux out of Holding Basin Domain	Percent Discharge Reduction from Current Conditions
Current Conditions	*6432 ft^3/day = 33.4 GPM*	*N/A*

Future Condition, Proposed Holding Basin Footprint



Embedment Scenario	Seepage Flux out of Holding Basin Domain	Percent Discharge Reduction from Current Conditions
Shallow Wall (5 ft into Till)	*2.60 ft^3/day = 0.0135 GPM*	*99.959%*
Intermediate Wall (10 ft into Till)	*2.47 ft^3/day = 0.0128 GPM*	*99.961%*
Deep Wall (5 ft into Rock)	*2.42 ft^3/day = 0.0126 GPM*	*99.962%*

Note:
1. Future Condition scenario models both low permeability cap and holding basin containment wall.
2. Holding Basin Footprint represents ice contact deposits within proposed holding basin footprint.
3. GPM = gallons per minute.
4. Seepage model flux output taken from Holding Basin 3D Seepage Model and represents steady-state water flux out of basin.

BASE CASE MODEL RESULTS

Model Scenario	Seepage Flux out of Holding Basin Domain ft^3/day
Current Conditions (No Wall)	6432.0
Shallow embedment (5 ft into Glacial Till)	2.60
Intermediate embedment (10 ft into Glacial Till or Top of Bedrock)	2.47
Deep embedment (5 ft into Bedrock)	2.42

Note:

1. Seepage model flux output taken from Holding Basin 3D Seepage Model and represents steady-state water flux out of basin.
2. Base Case seepage flux for different embedment scenarios used as comparison for sensitivity analysis percent change.

MODEL PARAMETER SENSITIVITY ANALYSIS

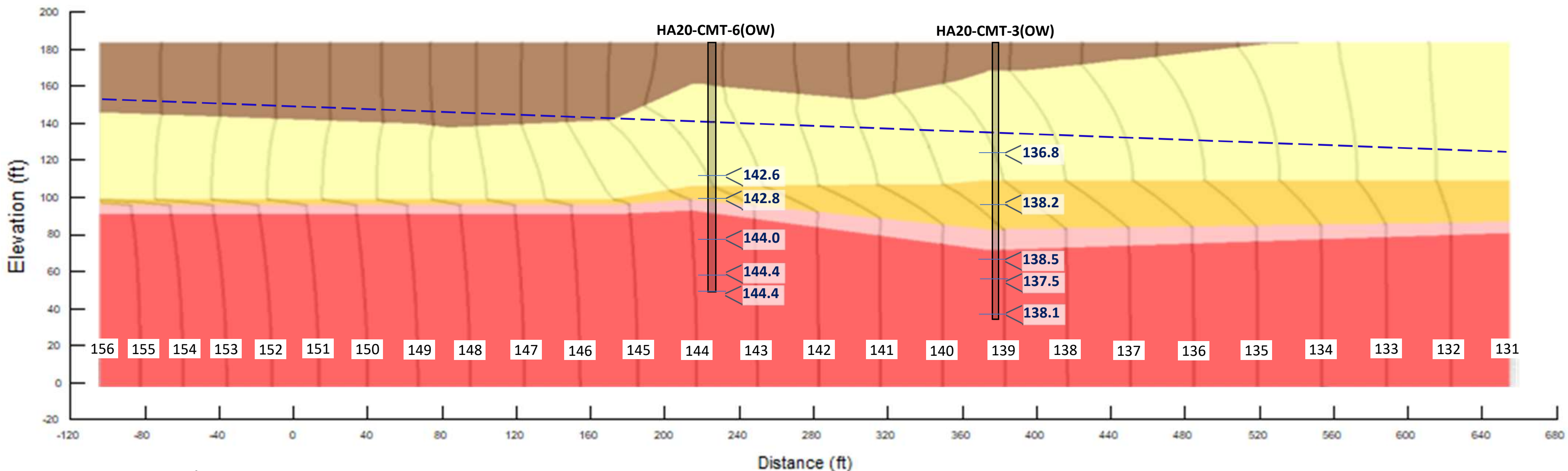
Description	Initial Parameter Value	Sensitivity Value	Embedment Scenario	Seepage Flux out of Holding Basin ft^3/day	Percent Change in Seepage Flux[2]
Ice Contact Deposit Hydraulic Conductivity	**1.0 E-02 cm/sec**	**1.0E-03 cm/sec**	Current Conditions	696.49	-89.2%
			Shallow Wall	2.62	0.9%
			Intermediate Wall	2.50	1.4%
			Deep Wall	2.46	1.7%
		5.0E-03 cm/sec	Current Conditions	3271.13	-49.1%
			Shallow Wall	2.60	0.1%
			Intermediate Wall	2.48	0.4%
			Deep Wall	2.43	0.5%
Ice Contact Anistropy (Ky/Kx)	**0.1**	**1.0**	Current Conditions	6759.48	5.1%
			Shallow Wall	2.56	-1.6%
			Intermediate Wall	2.47	-0.2%
			Deep Wall	2.42	-0.2%
Glacial Till Hydraulic Conductivity	**1.0E-05 cm/sec**	**1.0E-04 cm/sec**	Current Conditions	6429.71	0.0%
			Shallow Wall	2.63	1.2%
			Intermediate Wall	2.49	1.0%
			Deep Wall	2.45	1.1%
		5.0E-05 cm/sec	Current Conditions	6430.29	0.0%
			Shallow Wall	2.61	0.5%
			Intermediate Wall	2.49	0.6%
			Deep Wall	2.44	0.8%
Containment Wall Hydraulic Conducitivity	**1.0E-07 cm/sec**	**1.0E-06 cm/sec**	Shallow Wall	3.58	37.6%
			Intermediate Wall	2.77	12.1%
			Deep Wall	2.46	1.7%
		1.0E-08 cm/sec	Shallow Wall	2.46	-5.5%
			Intermediate Wall	2.22	-10.3%
			Deep Wall	2.17	-10.2%

Note:

1. Model simulation sensitivity analysis adjusts one parameter per model run.
2. Percent Change in Seepage Flux calculated by equation:

Percent Change in Seepage Flux = (Sensitivity Run Output Flux - Base Case Output Flux) / Base Case Output Flux

Model Simulation Results



Legend

144.0 CMT Channel Groundwater Elevations collected March 2021

Simulated Water Table Surface

Simulated Groundwater Flow Contours

Fill:
Simulated Hydraulic Conductivity 1.0 x 10^{-3} cm/sec

Ice Contact Deposits:
Simulated Hydraulic Conductivity 1.0 x 10^{-2} cm/sec

Glacial Till:
Simulated Hydraulic Conductivity 1.0 x 10^{-5} cm/sec

Weathered Bedrock:
Simulated Hydraulic Conductivity 7.4 x 10^{-5} cm/sec

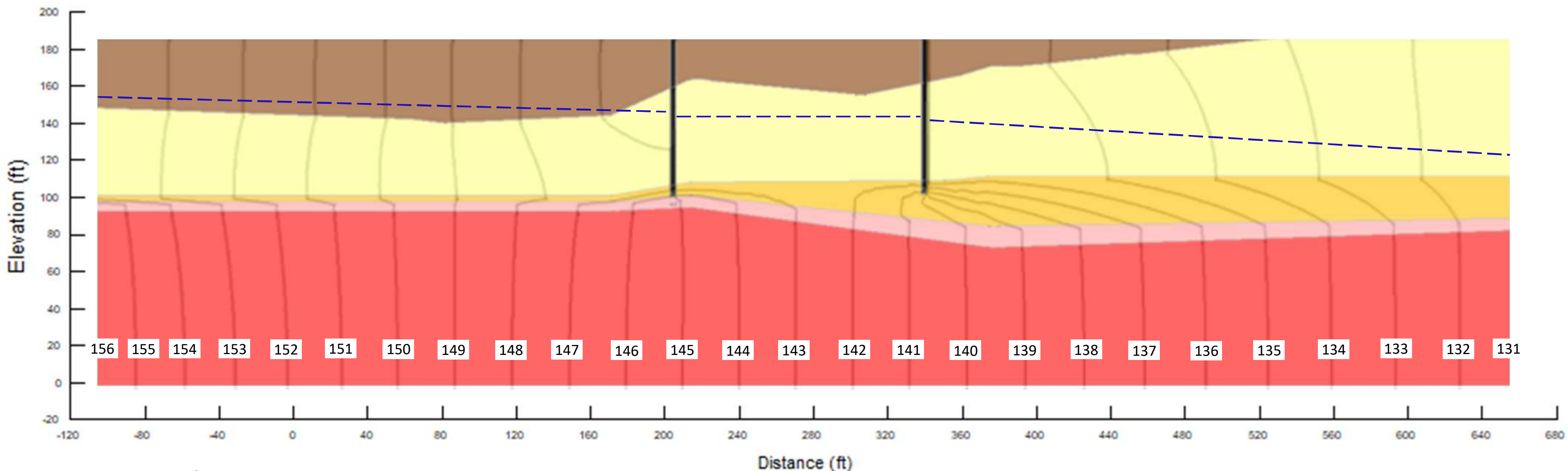
Competent Bedrock:
Simulated Hydraulic Conductivity 3.9 x 10^{-5} cm/sec

Slurry Wall:
Simulated Hydraulic Conductivity 1.0 x 10^{-7} cm/sec

HALEY ALDRICH
Nuclear Metals Inc.
Concord, Massachusetts

Current Site Conditions

September 2022



Legend

Simulated Water Table Surface

Simulated Groundwater Flow Contours

Fill:
Simulated Hydraulic Conductivity 1.0×10^{-3} cm/sec

Ice Contact Deposits:
Simulated Hydraulic Conductivity 1.0×10^{-2} cm/sec

Glacial Till:
Simulated Hydraulic Conductivity 1.0×10^{-5} cm/sec

Weathered Bedrock:
Simulated Hydraulic Conductivity 7.4×10^{-5} cm/sec

Competent Bedrock:
Simulated Hydraulic Conductivity 3.9×10^{-5} cm/sec

Slurry Wall:
Simulated Hydraulic Conductivity 1.0×10^{-7} cm/sec

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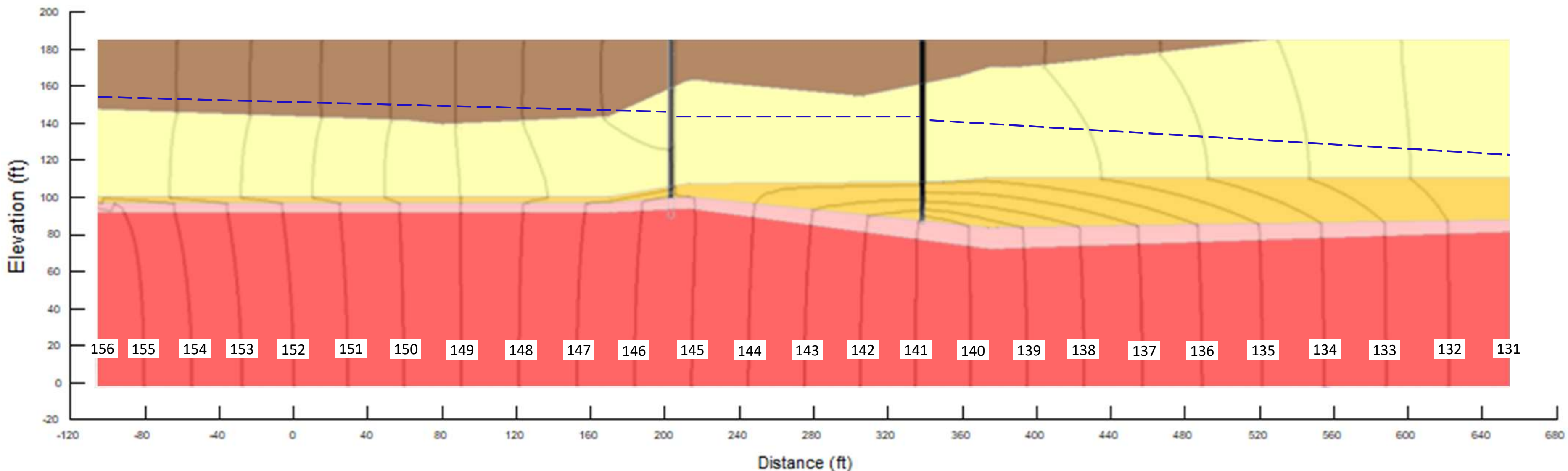
Nuclear Metals Inc.
Concord, Massachusetts

Shallow Wall
(5 ft Till Embedment)
3 Ft Wall Thickness

September 2022



Legend

- - - Simulated Water Table Surface

— Simulated Groundwater Flow Contours

Fill: Simulated Hydraulic Conductivity 1.0×10^{-3} cm/sec

Ice Contact Deposits: Simulated Hydraulic Conductivity 1.0×10^{-2} cm/sec

Glacial Till: Simulated Hydraulic Conductivity 1.0×10^{-5} cm/sec

Weathered Bedrock: Simulated Hydraulic Conductivity 7.4×10^{-5} cm/sec

Competent Bedrock: Simulated Hydraulic Conductivity 3.9×10^{-5} cm/sec

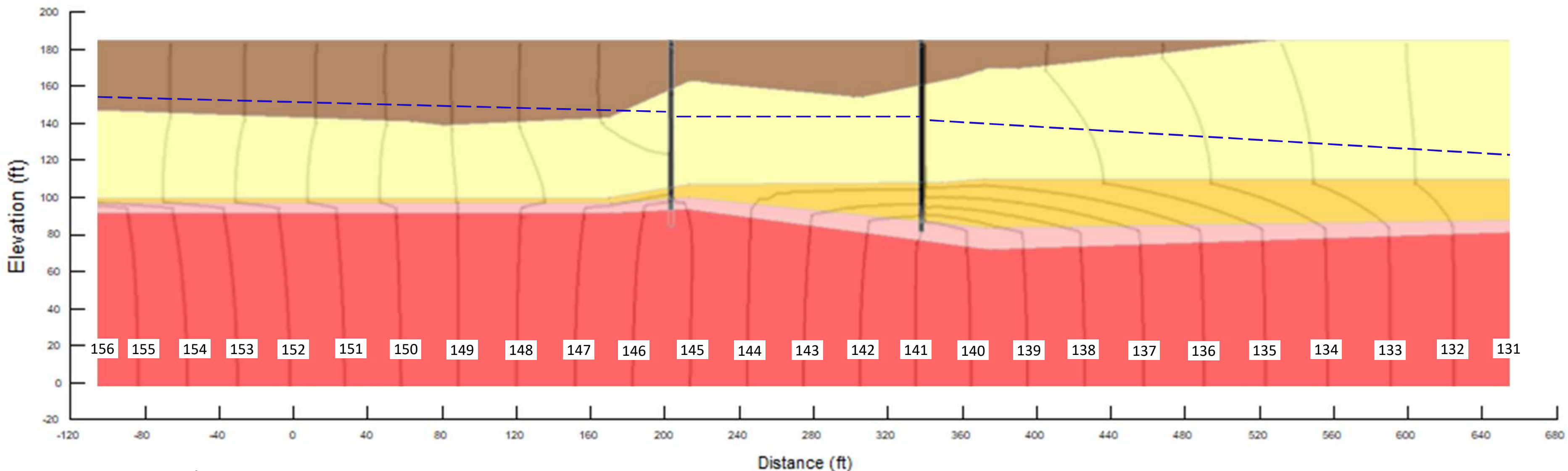
Slurry Wall: Simulated Hydraulic Conductivity 1.0×10^{-7} cm/sec

HALEY ALDRICH

Nuclear Metals Inc.
Concord, Massachusetts

Intermediate Wall
(10 ft Till Embedment)
3 Ft Wall Thickness

September 2022



Legend

- Simulated Water Table Surface
- Simulated Groundwater Flow Contours
- **Fill:** Simulated Hydraulic Conductivity 1.0 x 10^{-3} cm/sec
- **Ice Contact Deposits:** Simulated Hydraulic Conductivity 1.0 x 10^{-2} cm/sec
- **Glacial Till:** Simulated Hydraulic Conductivity 1.0 x 10^{-5} cm/sec
- **Weathered Bedrock:** Simulated Hydraulic Conductivity 7.4 x 10^{-5} cm/sec
- **Competent Bedrock:** Simulated Hydraulic Conductivity 3.9 x 10^{-5} cm/sec
- **Slurry Wall:** Simulated Hydraulic Conductivity 1.0 x 10^{-7} cm/sec

HALEY ALDRICH
Nuclear Metals Inc.
Concord, Massachusetts

Deep Wall
(5 ft Rock Embedment)
3 Ft Wall Thickness

September 2022

APPENDIX F

Laboratory Reports

Alpha Laboratory Reports

ANALYTICAL REPORT

Lab Number:	L2116995
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	3252H
Report Date:	04/19/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2116995-01	GZW-9-1-04052021	WATER	CONCORD, MA	04/05/21 11:55	04/05/21
L2116995-02	MW-S36-04052021	WATER	CONCORD, MA	04/05/21 11:55	04/05/21
L2116995-03	MW-S07-04052021	WATER	CONCORD, MA	04/05/21 12:15	04/05/21
L2116995-04	HA20-CMT-3B(OW)-04052021	WATER	CONCORD, MA	04/05/21 14:00	04/05/21
L2116995-05	MW-SD29-04052021	WATER	CONCORD, MA	04/05/21 14:25	04/05/21
L2116995-06	MW-SD36-04052021	WATER	CONCORD, MA	04/05/21 15:20	04/05/21
L2116995-07	MW-SD60-04052021	WATER	CONCORD, MA	04/05/21 15:05	04/05/21
L2116995-08	MW-BS15-04052021	WATER	CONCORD, MA	04/05/21 12:40	04/05/21
L2116995-09	MW-BM15-04052021	WATER	CONCORD, MA	04/05/21 14:00	04/05/21
L2116995-10	FIELD BLANK1-04052021	WATER	CONCORD, MA	04/05/21 13:00	04/05/21
L2116995-11	TRIP BLANK1-04052021	WATER	CONCORD, MA	04/05/21 00:00	04/05/21
L2116995-12	EQ BLANK1-04052021	WATER	CONCORD, MA	04/05/21 16:30	04/05/21

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2116995-10: The analyses performed were specified by the client.

MCP Related Narratives

Volatile Organics

L2116995-01 through -09, and -11: Initial calibration utilized a quadratic fit for: n-butylbenzene, p-isopropyltoluene

L2116995-01 through -09, and -11: A copy of the continuing calibration standard is included as an addendum to this report.

In reference to question H:

L2116995-01 through -09, and -11: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0025)

Average Response Factor: 1,4-dioxane

Semivolatile Organics

L2116995-01, -02, -03, -04, -05, -06, -07, -08, -09, WG1484239-1, WG1484239-2, and WG1484239-3: The initial calibration utilized a quadratic fit for Butyl benzyl phthalate, Bis(2-ethylhexyl)phthalate, Di-n-octylphthalate.

In reference to question H:

The WG1484239-1 Method Blank, associated with L2116995-01 through -09, has a concentration above the reporting limit for Bis(2-ethylhexyl)phthalate. Since the sample(s) were non-detect to the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.

The WG1484239-2/-3 LCS/LCSD recoveries, associated with L2116995-01 through -09, are below the

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
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Case Narrative (continued)

individual acceptance criteria for aniline (28%/32%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.
The WG1484239-2/-3 LCS/LCSD RPDs, associated with L2116995-01 through -09, are above the acceptance criteria for 1,3-dichlorobenzene (21%), hexachlorobutadiene (22%), hexachloroethane (21%), and naphthalene (21%).

Semivolatile Organics by SIM
WG1484244-2 and WG1484244-3: The initial calibration utilized a quadratic fit for Pentachlorophenol.

Non-MCP Related Narratives
Perfluorinated Alkyl Acids by Isotope Dilution
L2116995-08, -09, -10, -12, WG1484163-1, WG1484163-2, WG1484163-3, and WG1484163-4: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.
L2116995-08, -09, -10, -12, WG1484163-3 and WG1484163-4: The MeOH fraction of the extraction is reported for the following compounds: Perfluorooctanesulfonamide (FOSA), N-Methyl Perfluorooctane Sulfonamide (NMeFOSA), N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA), N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE), and N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).
The WG1484163-1 Method Blank, associated with L2116995-08, -09, -10, and -12, has a concentration above the reporting limit for NEtFOSAA. Since the sample(s) were non-detect to the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.
The WG1484163-2 LCS recovery, associated with L2116995-08, -09, -10, and -12, is above the acceptance criteria for perfluorooctadecanoic acid (pfoda) (229%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.
The WG1484163-3 MS recovery, performed on L2116995-08, is outside the acceptance criteria for

Case Narrative (continued)

perfluorooctadecanoic acid (pfoda) (335%).

Nitrogen, Nitrate
The WG1483189-3 Laboratory Duplicate RPD for nitrogen, nitrate (10%), performed on L2116995-04, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

Dissolved Organic Carbon
The samples were field filtered; a filter blank was not received.

Anions by Ion Chromatography
The WG1485395-3 MS recovery, performed on L2116995-04, is outside the acceptance criteria for sulfate (68%) and chloride (31%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Jennifer L Clements

Title: Technical Director/Representative Date: 04/19/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2116995

Report Date: 04/19/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Semivolatile Organics - Westborough Lab								
8270D	Batch QC	WG1484239-2	Aniline	LCS	28	40-140	01-09	potential low bias
8270D	Batch QC	WG1484239-3	1,3-Dichlorobenzene	LCSD	21	20	01-09	non-directional bias
8270D	Batch QC	WG1484239-3	Hexachlorobutadiene	LCSD	22	20	01-09	non-directional bias
8270D	Batch QC	WG1484239-3	Hexachloroethane	LCSD	21	20	01-09	non-directional bias
8270D	Batch QC	WG1484239-3	Naphthalene	LCSD	21	20	01-09	non-directional bias
8270D	Batch QC	WG1484239-3	Aniline	LCSD	32	40-140	01-09	potential low bias
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab								
LCMSMS-ID	Batch QC	WG1484163-2	Perfluorooctadecanoic Acid (PFODA)	LCS	229	10-119	08-10,12	potential high bias
LCMSMS-ID	Batch QC (L2116995-08)	WG1484163-3	Perfluorooctadecanoic Acid (PFODA)	MS	335	10-119	08-10,12	potential high bias
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2116995-04)	WG1485395-3	Chloride	MS	63	90-110	04,07	potential low bias
300.0	Batch QC (L2116995-04)	WG1485395-3	Sulfate	MS	67	90-110	04,07	potential low bias
General Chemistry - Westborough Lab								
353.2	Batch QC (L2116995-04)	WG1483189-3	Nitrogen, Nitrate	Duplicate	10	6	01-09	non-directional bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-01	Date Collected:	04/05/21 11:55
Client ID:	GZW-9-1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Matrix:	Water
Analytical Method:	97,8260C
Analytical Date:	04/14/21 05:41
Analyst:	MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.78	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-01
Date Collected: 04/05/21 11:55
Client ID: GZW-9-1-04052021
Date Received: 04/05/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-01	Date Collected:	04/05/21 11:55
Client ID:	GZW-9-1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	106		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-02
Client ID: MW-S36-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 11:55
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/14/21 06:12
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-02	Date Collected:	04/05/21 11:55
Client ID:	MW-S36-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	0.54	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-02 | Date Collected: 04/05/21 11:55
Client ID: MW-S36-04052021 | Date Received: 04/05/21
Sample Location: CONCORD, MA | Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	107		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-03
Client ID: MW-S07-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 12:15
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/14/21 06:42
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.30	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	7.6		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-03	Date Collected:	04/05/21 12:15
Client ID:	MW-S07-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.1		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-03	Date Collected:	04/05/21 12:15
Client ID:	MW-S07-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	106		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-04	Date Collected:	04/05/21 14:00
Client ID:	HA20-CMT-3B(OW)-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/14/21 07:12
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.83	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	0.44	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.18	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-04	Date Collected:	04/05/21 14:00
Client ID:	HA20-CMT-3B(OW)-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.1		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.37	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.37	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-04	Date Collected:	04/05/21 14:00
Client ID:	HA20-CMT-3B(OW)-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	104		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-05	Date Collected:	04/05/21 14:25
Client ID:	MW-SD29-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/14/21 07:42
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.8		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-05	Date Collected:	04/05/21 14:25
Client ID:	MW-SD29-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-05	Date Collected:	04/05/21 14:25
Client ID:	MW-SD29-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	106		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-06
Client ID: MW-SD36-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 15:20
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/14/21 08:12
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-06 Date Collected: 04/05/21 15:20
Client ID: MW-SD36-04052021 Date Received: 04/05/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.79	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	0.27	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.60	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.60	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-06	Date Collected:	04/05/21 15:20
Client ID:	MW-SD36-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	106		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-07
Client ID: MW-SD60-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 15:05
Date Received: 04/05/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/14/21 08:43
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.6		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-07	Date Collected:	04/05/21 15:05
Client ID:	MW-SD60-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.32	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-07	Date Collected:	04/05/21 15:05
Client ID:	MW-SD60-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	107		70-130

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-08	Date Collected:	04/05/21 12:40
Client ID:	MW-BS15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/14/21 09:13
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	2.8		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	1.6		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	1.9		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-08 | Date Collected: 04/05/21 12:40
Client ID: MW-BS15-04052021 | Date Received: 04/05/21
Sample Location: CONCORD, MA | Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	5.1		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.95	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.95	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-08 Date Collected: 04/05/21 12:40
Client ID: MW-BS15-04052021 Date Received: 04/05/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	61	J	ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	104		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Matrix:	Water
Analytical Method:	97,8260C
Analytical Date:	04/14/21 09:43
Analyst:	MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	106		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-11
Client ID: TRIP BLANK1-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 00:00
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/14/21 05:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-11 Date Collected: 04/05/21 00:00
Client ID: TRIP BLANK1-04052021 Date Received: 04/05/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-11	Date Collected:	04/05/21 00:00
Client ID:	TRIP BLANK1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	104		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/14/21 04:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-09,11 Batch: WG1486072-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/14/21 04:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-09,11 Batch: WG1486072-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/14/21 04:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-09,11 Batch: WG1486072-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	105		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09,11 Batch: WG1486072-3 WG1486072-4								
Methylene chloride	110		100		70-130	10		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	100		100		70-130	0		20
1,2-Dichloropropane	110		100		70-130	10		20
Dibromochloromethane	100		99		70-130	1		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	94		90		70-130	4		20
Chlorobenzene	100		96		70-130	4		20
Trichlorofluoromethane	100		100		70-130	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	100		100		70-130	0		20
Bromodichloromethane	110		100		70-130	10		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	120		110		70-130	9		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	110		100		70-130	10		20
1,1,2,2-Tetrachloroethane	110		100		70-130	10		20
Benzene	110		100		70-130	10		20
Toluene	100		96		70-130	4		20
Ethylbenzene	100		97		70-130	3		20
Chloromethane	110		100		70-130	10		20
Bromomethane	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09,11 Batch: WG1486072-3 WG1486072-4								
Vinyl chloride	110		100		70-130	10		20
Chloroethane	110		100		70-130	10		20
1,1-Dichloroethene	110		100		70-130	10		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		95		70-130	5		20
1,2-Dichlorobenzene	100		98		70-130	2		20
1,3-Dichlorobenzene	100		96		70-130	4		20
1,4-Dichlorobenzene	100		95		70-130	5		20
Methyl tert butyl ether	110		110		70-130	0		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	95		90		70-130	5		20
cis-1,2-Dichloroethene	110		100		70-130	10		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	110		110		70-130	0		20
Styrene	95		90		70-130	5		20
Dichlorodifluoromethane	100		100		70-130	0		20
Acetone	120		110		70-130	9		20
Carbon disulfide	100		98		70-130	2		20
Methyl ethyl ketone	120		120		70-130	0		20
Methyl isobutyl ketone	92		98		70-130	6		20
2-Hexanone	96		99		70-130	3		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	120		110		70-130	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09,11 Batch: WG1486072-3 WG1486072-4								
2,2-Dichloropropane	120		110		70-130	9		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	100		100		70-130	0		20
1,1,1,2-Tetrachloroethane	100		98		70-130	2		20
Bromobenzene	110		100		70-130	10		20
n-Butylbenzene	87		80		70-130	8		20
sec-Butylbenzene	93		87		70-130	7		20
tert-Butylbenzene	94		88		70-130	7		20
o-Chlorotoluene	100		94		70-130	6		20
p-Chlorotoluene	100		95		70-130	5		20
1,2-Dibromo-3-chloropropane	110		100		70-130	10		20
Hexachlorobutadiene	89		81		70-130	9		20
Isopropylbenzene	100		95		70-130	5		20
p-Isopropyltoluene	83		78		70-130	6		20
Naphthalene	110		110		70-130	0		20
n-Propylbenzene	96		90		70-130	6		20
1,2,3-Trichlorobenzene	110		100		70-130	10		20
1,2,4-Trichlorobenzene	100		96		70-130	4		20
1,3,5-Trimethylbenzene	94		89		70-130	5		20
1,2,4-Trimethylbenzene	97		91		70-130	6		20
Diethyl ether	110		110		70-130	0		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09,11 Batch: WG1486072-3 WG1486072-4								
Tertiary-Amyl Methyl Ether	110		110		70-130	0		20
1,4-Dioxane	110		104		70-130	6		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		101		70-130
Toluene-d8	96		97		70-130
4-Bromofluorobenzene	104		103		70-130
Dibromofluoromethane	103		103		70-130

SEMIVOLATILES

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-01	Date Collected:	04/05/21 11:55
Client ID:	GZW-9-1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/09/21 07:51
Analytical Date:	04/11/21 00:38		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-01	Date Collected:	04/05/21 11:55
Client ID:	GZW-9-1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	68		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-01	Date Collected:	04/05/21 11:55
Client ID:	GZW-9-1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 11:02		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-01	Date Collected:	04/05/21 11:55
Client ID:	GZW-9-1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 07:54
Analytical Date:	04/14/21 18:11		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-01
Date Collected: 04/05/21 11:55
Client ID: GZW-9-1-04052021
Date Received: 04/05/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-110
Phenol-d6	43		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	48		15-110
4-Terphenyl-d14	76		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-02
Client ID: MW-S36-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 11:55
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 01:02
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 14:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-02 Date Collected: 04/05/21 11:55
Client ID: MW-S36-04052021 Date Received: 04/05/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	55		30-130
2-Fluorobiphenyl	52		30-130
2,4,6-Tribromophenol	45		15-110
4-Terphenyl-d14	52		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-02	Date Collected:	04/05/21 11:55
Client ID:	MW-S36-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 11:33		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0899	J	ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-02	Date Collected:	04/05/21 11:55
Client ID:	MW-S36-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 14:34
Analytical Date:	04/14/21 18:30		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-02	Date Collected:	04/05/21 11:55
Client ID:	MW-S36-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	40		15-110
4-Terphenyl-d14	66		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-03
Client ID: MW-S07-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 12:15
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 01:24
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-03	Date Collected:	04/05/21 12:15
Client ID:	MW-S07-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	56		30-130
2-Fluorobiphenyl	52		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	55		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-03	Date Collected:	04/05/21 12:15
Client ID:	MW-S07-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 12:01		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.280		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-03	Date Collected:	04/05/21 12:15
Client ID:	MW-S07-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 07:54
Analytical Date:	04/14/21 18:48		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.02	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	0.01	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.02	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-03	Date Collected:	04/05/21 12:15
Client ID:	MW-S07-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	56		30-130
2-Fluorobiphenyl	58		30-130
2,4,6-Tribromophenol	55		15-110
4-Terphenyl-d14	64		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-04
Client ID: HA20-CMT-3B(OW)-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 14:00
Date Received: 04/05/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 01:47
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-04	Date Collected:	04/05/21 14:00
Client ID:	HA20-CMT-3B(OW)-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		15-110
Phenol-d6	33		15-110
Nitrobenzene-d5	57		30-130
2-Fluorobiphenyl	54		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	60		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-04	Date Collected:	04/05/21 14:00
Client ID:	HA20-CMT-3B(OW)-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 12:30		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	2.53		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-04
Client ID: HA20-CMT-3B(OW)-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 14:00
Date Received: 04/05/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/14/21 19:07
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.02	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-04	Date Collected:	04/05/21 14:00
Client ID:	HA20-CMT-3B(OW)-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		15-110
Phenol-d6	31		15-110
Nitrobenzene-d5	53		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	44		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-05	Date Collected:	04/05/21 14:25
Client ID:	MW-SD29-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/09/21 07:51
Analytical Date:	04/11/21 02:10		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-05	Date Collected:	04/05/21 14:25
Client ID:	MW-SD29-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		15-110
Phenol-d6	31		15-110
Nitrobenzene-d5	51		30-130
2-Fluorobiphenyl	47		30-130
2,4,6-Tribromophenol	50		15-110
4-Terphenyl-d14	53		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-05	Date Collected:	04/05/21 14:25
Client ID:	MW-SD29-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 07:30
Analytical Date:	04/10/21 11:12		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.208		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	54		15-110

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-05
Client ID: MW-SD29-04052021
Sample Location: CONCORD, MA
Date Collected: 04/05/21 14:25
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/14/21 19:25
Analyst: WR
Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-05	Date Collected:	04/05/21 14:25
Client ID:	MW-SD29-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		15-110
Phenol-d6	29		15-110
Nitrobenzene-d5	45		30-130
2-Fluorobiphenyl	47		30-130
2,4,6-Tribromophenol	38		15-110
4-Terphenyl-d14	54		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-06	Date Collected:	04/05/21 15:20
Client ID:	MW-SD36-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/09/21 07:51
Analytical Date:	04/11/21 02:33		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-06	Date Collected:	04/05/21 15:20
Client ID:	MW-SD36-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-110
Phenol-d6	33		15-110
Nitrobenzene-d5	53		30-130
2-Fluorobiphenyl	50		30-130
2,4,6-Tribromophenol	57		15-110
4-Terphenyl-d14	55		30-130

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-06
Client ID: MW-SD36-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 15:20
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/10/21 11:40
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.119	J	ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-06
Client ID: MW-SD36-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 15:20
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/14/21 19:44
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-06	Date Collected:	04/05/21 15:20
Client ID:	MW-SD36-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	56		30-130
2-Fluorobiphenyl	58		30-130
2,4,6-Tribromophenol	39		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2116995

Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-07
Client ID: MW-SD60-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 15:05
Date Received: 04/05/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 02:55
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-07	Date Collected:	04/05/21 15:05
Client ID:	MW-SD60-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-07	Date Collected:	04/05/21 15:05
Client ID:	MW-SD60-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 07:30
Analytical Date:	04/10/21 12:08		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.590		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	55		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-07	Date Collected:	04/05/21 15:05
Client ID:	MW-SD60-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 07:54
Analytical Date:	04/14/21 20:02		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-07	Date Collected:	04/05/21 15:05
Client ID:	MW-SD60-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	28		15-110
Phenol-d6	33		15-110
Nitrobenzene-d5	59		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	25		15-110
4-Terphenyl-d14	68		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2116995

Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-08	Date Collected:	04/05/21 12:40
Client ID:	MW-BS15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/10/21 23:24		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.548	J	ng/l	1.79	0.365	1
Perfluoropentanoic Acid (PFPeA)	2.93		ng/l	1.79	0.355	1
Perfluorobutanesulfonic Acid (PFBS)	0.616	J	ng/l	1.79	0.213	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.79	0.405	1
Perfluorohexanoic Acid (PFHxA)	1.97		ng/l	1.79	0.294	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.79	0.220	1
Perfluoroheptanoic Acid (PFHpA)	0.681	J	ng/l	1.79	0.202	1
Perfluorohexanesulfonic Acid (PFHxS)	1.10	J	ng/l	1.79	0.337	1
Perfluorooctanoic Acid (PFOA)	1.82		ng/l	1.79	0.211	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	9.04		ng/l	1.79	1.19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.79	0.616	1
Perfluorononanoic Acid (PFNA)	0.491	J	ng/l	1.79	0.279	1
Perfluorooctanesulfonic Acid (PFOS)	7.30		ng/l	1.79	0.451	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.79	0.272	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.79	1.08	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.79	1.00	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.580	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.233	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.79	0.878	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.79	0.720	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.333	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.293	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.222	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.8	20.3	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.79	0.301	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.58	1.11	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.58	1.03	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-08	Date Collected:	04/05/21 12:40
Client ID:	MW-BS15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.79	0.552	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.48	1.81	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.79	0.248	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.79	0.262	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	85		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**59**	Q	62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	79		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	124		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	67		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	78		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	98		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	81		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**166**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	66		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	81		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**165**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	78		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	78		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	97		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	101		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	81		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	72		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-08	Date Collected:	04/05/21 12:40
Client ID:	MW-BS15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/17/21 10:53		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.79	0.519	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.9	6.59	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.9	5.95	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.8	19.9	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.8	20.2	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	76		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	49		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	43		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	59		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	55		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-08
Client ID: MW-BS15-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 12:40
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 03:18
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	JB	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-08	Date Collected:	04/05/21 12:40
Client ID:	MW-BS15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	61		30-130
2-Fluorobiphenyl	57		30-130
2,4,6-Tribromophenol	64		15-110
4-Terphenyl-d14	60		30-130

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-08
Client ID: MW-BS15-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 12:40
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/10/21 12:37
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	69.8		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	54		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-08	Date Collected:	04/05/21 12:40
Client ID:	MW-BS15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 07:54
Analytical Date:	04/14/21 20:21		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	JB	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.01	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.01	JB	ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-08	Date Collected:	04/05/21 12:40
Client ID:	MW-BS15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	65		15-110
4-Terphenyl-d14	72		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/10/21 23:57		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.83	0.373	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.83	0.362	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.83	0.218	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.83	0.413	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.83	0.300	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.83	0.224	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.83	0.206	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.83	0.344	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.83	0.216	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.83	1.22	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.83	0.629	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.83	0.285	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.83	0.460	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.83	0.278	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.83	1.11	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.83	1.02	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	0.914	JF	ng/l	1.83	0.592	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.83	0.238	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.83	0.896	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.83	0.735	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.83	0.340	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.83	0.299	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.83	0.227	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	45.7	20.7	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.83	0.307	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.66	1.13	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.66	1.05	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.83	0.563	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.57	1.85	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.83	0.253	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.83	0.268	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	79		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**61**	Q	62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**143**	Q	12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	72		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	87		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	114		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	89		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**198**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	74		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	80		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**200**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	62		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	85		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	99		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	99		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	75		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	67		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/17/21 20:16		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.83	0.530	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.3	6.73	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.3	6.07	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	45.7	20.3	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	45.7	20.6	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	36		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	28		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	48		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	44		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2116995

Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/09/21 07:51
Analytical Date:	04/11/21 03:41		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	41		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	54		15-110
4-Terphenyl-d14	61		30-130

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-09
Client ID: MW-BM15-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 14:00
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/10/21 13:06
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.795		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	54		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 07:54
Analytical Date:	04/14/21 20:39		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.06	JB	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	JB	ug/l	0.10	0.01	1
Pyrene	0.03	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	45		15-110
4-Terphenyl-d14	72		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-10	Date Collected:	04/05/21 13:00
Client ID:	FIELD BLANK1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/11/21 00:30		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.85	0.378	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.85	0.367	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.85	0.220	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.85	0.418	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.85	0.304	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.85	0.227	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.85	0.208	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.85	0.348	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.85	0.218	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.85	1.23	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.85	0.637	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.85	0.289	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.85	0.467	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.85	0.281	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.85	1.12	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.85	1.04	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.85	0.600	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.85	0.241	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.85	0.907	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.85	0.744	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.85	0.344	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.85	0.303	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.85	0.230	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	46.3	21.0	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.85	0.311	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.70	1.15	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.70	1.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-10	Date Collected:	04/05/21 13:00
Client ID:	FIELD BLANK1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.85	0.570	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.63	1.87	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.85	0.256	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.85	0.271	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	103		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	73		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	95		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	133		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	84		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	96		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	116		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	96		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**190**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	84		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	103		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	99		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**212**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	98		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	105		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	108		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	129		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	114		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	114		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	78		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2116995

Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-10	Date Collected:	04/05/21 13:00
Client ID:	FIELD BLANK1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/17/21 20:30		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.85	0.537	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.5	6.81	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.5	6.15	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	46.3	20.6	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	46.3	20.8	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	75		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	31		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	25		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	52		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	46		10-187

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-12
Client ID: EQ BLANK1-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 16:30
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/11/21 00:47
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 04/09/21 03:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.85	0.377	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.85	0.366	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.85	0.220	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.85	0.418	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.85	0.303	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.85	0.227	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.85	0.208	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.85	0.348	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.85	0.218	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.85	1.23	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.85	0.636	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.85	0.288	1
Perfluorooctanesulfonic Acid (PFOS)	0.898	JF	ng/l	1.85	0.466	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.85	0.281	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.85	1.12	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.85	1.04	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.85	0.599	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.85	0.240	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.85	0.906	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.85	0.743	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.85	0.344	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.85	0.302	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.85	0.229	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	46.2	21.0	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.85	0.310	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.70	1.15	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.70	1.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-12	Date Collected:	04/05/21 16:30
Client ID:	EQ BLANK1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.85	0.569	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.62	1.87	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.85	0.256	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.85	0.271	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	96		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	68		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	89		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	140		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	75		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	88		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	109		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	89		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**198**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	79		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	99		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	95		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**206**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	84		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	106		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	88		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	111		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	112		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	83		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	70		10-206

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-12	Date Collected:	04/05/21 16:30
Client ID:	EQ BLANK1-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/17/21 20:37		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.85	0.536	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.5	6.80	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.5	6.14	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	46.2	20.5	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	46.2	20.8	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	72		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	37		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	30		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	54		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	47		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/10/21 01:03	Extraction Date:	04/09/21 07:30
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 05-09 Batch: WG1483975-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	55		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/10/21 22:34	Extraction Date:	04/09/21 03:42
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 08-10,12 Batch: WG1484163-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	1.65	J	ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	0.264	JF	ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2.46		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	0.376	J	ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/10/21 22:34	Extraction Date:	04/09/21 03:42
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 08-10,12 Batch: WG1484163-1					
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24
Perfluorooctadecanoic Acid (PFODA)	1.46	JF	ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/10/21 22:34	Extraction Date:	04/09/21 03:42
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 08-10,12 Batch: WG1484163-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	98		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	68		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	89		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	133		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	78		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	90		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	110		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**182**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	80		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	98		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	97		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**204**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	102		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	107		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	52		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	110		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	127		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	121		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	94		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	86		10-206

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/13/21 03:26
Analyst: HT
Extraction Method: ALPHA 23528
Extraction Date: 04/09/21 03:42

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 08-10,12 Batch: WG1484163-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	47		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	45		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	57		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	57		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/10/21 20:50
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-09 Batch: WG1484239-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	13		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/10/21 20:50
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-09 Batch: WG1484239-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/10/21 20:50	Extraction Date:	04/09/21 07:51
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-09 Batch: WG1484239-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	37		15-110
Nitrobenzene-d5	59		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	61		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 15:00
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:54

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-09 Batch: WG1484244-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	0.01	J	ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/19/21 15:00	Extraction Date:	04/09/21 07:54
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-09 Batch: WG1484244-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	52		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	102		15-110
4-Terphenyl-d14	75		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/13/21 02:48
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-04 Batch: WG1484460-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 05-09 Batch: WG1483975-2 WG1483975-3								
1,4-Dioxane	106		106		40-140	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	53		54		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 Batch: WG1484163-2								
Perfluorobutanoic Acid (PFBA)	112		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	116		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	122		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	123		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	114		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	97		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	115		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	106		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	121		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	124		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	120		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	134		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	118		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	130		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	116		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	117		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	121		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	129		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	121		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	114		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	110		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	111		-		67-153	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2116995

Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 Batch: WG1484163-2								
Perfluorotridecanoic Acid (PFTrDA)	143		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	124		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	123		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	120		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	144		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	**229**	Q	-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	135		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	150		-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	86		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	74		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 Batch: WG1484163-2

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	95				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	66				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	87				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	136				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	88				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	107				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**174**	Q			14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	75				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	89				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**188**	Q			10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	94				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	91				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	54				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	101				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	105				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	108				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	90				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	73				10-206

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 Batch: WG1484163-2								
Perfluorooctanesulfonamide (FOSA)	102		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	125		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	122		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	124		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	119		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	63				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	46				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	44				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	52				10-187

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-09 Batch: WG1484239-2 WG1484239-3								
Acenaphthene	61		53		40-140	14		20
1,2,4-Trichlorobenzene	58		49		40-140	17		20
Hexachlorobenzene	60		57		40-140	5		20
Bis(2-chloroethyl)ether	62		51		40-140	19		20
2-Chloronaphthalene	62		53		40-140	16		20
1,2-Dichlorobenzene	58		48		40-140	19		20
1,3-Dichlorobenzene	57		46		40-140	**21**	Q	20
1,4-Dichlorobenzene	56		47		40-140	17		20
3,3'-Dichlorobenzidine	41		47		40-140	14		20
2,4-Dinitrotoluene	70		69		40-140	1		20
2,6-Dinitrotoluene	73		71		40-140	3		20
Azobenzene	62		58		40-140	7		20
Fluoranthene	64		60		40-140	6		20
4-Bromophenyl phenyl ether	62		58		40-140	7		20
Bis(2-chloroisopropyl)ether	62		52		40-140	18		20
Bis(2-chloroethoxy)methane	62		56		40-140	10		20
Hexachlorobutadiene	55		44		40-140	**22**	Q	20
Hexachloroethane	57		46		40-140	**21**	Q	20
Isophorone	60		52		40-140	14		20
Naphthalene	59		48		40-140	**21**	Q	20
Nitrobenzene	71		60		40-140	17		20
Bis(2-ethylhexyl)phthalate	64		68		40-140	6		20
Butyl benzyl phthalate	67		73		40-140	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-09 Batch: WG1484239-2 WG1484239-3								
Di-n-butylphthalate	60		59		40-140	2		20
Di-n-octylphthalate	64		68		40-140	6		20
Diethyl phthalate	64		64		40-140	0		20
Dimethyl phthalate	67		66		40-140	2		20
Benzo(a)anthracene	63		61		40-140	3		20
Benzo(a)pyrene	61		60		40-140	2		20
Benzo(b)fluoranthene	63		60		40-140	5		20
Benzo(k)fluoranthene	60		59		40-140	2		20
Chrysene	62		58		40-140	7		20
Acenaphthylene	61		54		40-140	12		20
Anthracene	62		56		40-140	10		20
Benzo(ghi)perylene	62		56		40-140	10		20
Fluorene	60		56		40-140	7		20
Phenanthrene	62		55		40-140	12		20
Dibenzo(a,h)anthracene	63		58		40-140	8		20
Indeno(1,2,3-cd)pyrene	61		57		40-140	7		20
Pyrene	61		58		40-140	5		20
Aniline	**28**	Q	**32**	Q	40-140	13		20
4-Chloroaniline	46		43		40-140	7		20
Dibenzofuran	59		54		40-140	9		20
2-Methylnaphthalene	60		49		40-140	20		20
Acetophenone	61		53		40-140	14		20
2,4,6-Trichlorophenol	64		62		30-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-09 Batch: WG1484239-2 WG1484239-3								
2-Chlorophenol	63		53		30-130	17		20
2,4-Dichlorophenol	69		63		30-130	9		20
2,4-Dimethylphenol	59		60		30-130	2		20
2-Nitrophenol	80		67		30-130	18		20
4-Nitrophenol	66		64		30-130	3		20
2,4-Dinitrophenol	91		84		30-130	8		20
Pentachlorophenol	75		79		30-130	5		20
Phenol	47		40		30-130	16		20
2-Methylphenol	60		55		30-130	9		20
3-Methylphenol/4-Methylphenol	63		58		30-130	8		20
2,4,5-Trichlorophenol	69		63		30-130	9		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	56		47		15-110
Phenol-d6	48		40		15-110
Nitrobenzene-d5	69		60		30-130
2-Fluorobiphenyl	60		51		30-130
2,4,6-Tribromophenol	69		70		15-110
4-Terphenyl-d14	60		58		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-09 Batch: WG1484244-2 WG1484244-3								
Acenaphthene	52		56		40-140	7		20
2-Chloronaphthalene	55		61		40-140	10		20
Fluoranthene	57		62		40-140	8		20
Hexachlorobutadiene	59		65		40-140	10		20
Naphthalene	51		54		40-140	6		20
Benzo(a)anthracene	56		62		40-140	10		20
Benzo(a)pyrene	52		63		40-140	19		20
Benzo(b)fluoranthene	59		65		40-140	10		20
Benzo(k)fluoranthene	56		64		40-140	13		20
Chrysene	56		62		40-140	10		20
Acenaphthylene	55		62		40-140	12		20
Anthracene	51		57		40-140	11		20
Benzo(ghi)perylene	56		65		40-140	15		20
Fluorene	56		61		40-140	9		20
Phenanthrene	53		58		40-140	9		20
Dibenzo(a,h)anthracene	58		66		40-140	13		20
Indeno(1,2,3-cd)pyrene	56		66		40-140	16		20
Pyrene	58		62		40-140	7		20
2-Methylnaphthalene	52		57		40-140	9		20
Pentachlorophenol	52		45		30-130	14		20
Hexachlorobenzene	71		77		40-140	8		20
Hexachloroethane	47		55		40-140	16		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-09 Batch: WG1484244-2 WG1484244-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	34		40		15-110
Phenol-d6	34		39		15-110
Nitrobenzene-d5	76		88		30-130
2-Fluorobiphenyl	56		62		30-130
2,4,6-Tribromophenol	67		82		15-110
4-Terphenyl-d14	62		67		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2116995

Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-04 Batch: WG1484460-2 WG1484460-3								
1,4-Dioxane	106		108		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	50		52		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 QC Batch ID: WG1484163-3 QC Sample: L2116995-08 Client ID: MW-BS15-04052021												
Perfluorobutanoic Acid (PFBA)	0.548J	36.4	41.4	112		-	-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	2.93	36.4	45.9	118		-	-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	0.616J	32.3	41.2	126		-	-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	34.1	41.9	123		-	-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	1.97	36.4	45.8	120		-	-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	34.2	34.0	99		-	-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	0.681J	36.4	43.1	117		-	-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	1.10J	33.3	37.3	109		-	-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	1.82	36.4	47.0	124		-	-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	9.04	34.6	51.2	122		-	-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	34.6	43.5	126		-	-		61-179	-		30
Perfluorononanoic Acid (PFNA)	0.491J	36.4	51.0	139		-	-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	7.30	33.8	48.8	123		-	-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	ND	36.4	47.3	130		-	-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	34.9	46.7	134		-	-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	35	44.2	126		-	-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	36.4	49.1	135		-	-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	36.4	50.6	139		-	-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	35.1	48.1	137		-	-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	ND	36.4	38.8	107		-	-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	36.4	41.3	113		-	-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	ND	36.4	42.9	118		-	-		67-153	-		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 QC Batch ID: WG1484163-3 QC Sample: L2116995-08 Client ID: MW-BS15-04052021												
Perfluorotridecanoic Acid (PFTrDA)	ND	36.4	53.6	147		-	-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	36.4	44.9	123		-	-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	728	873F	120		-	-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	34.4	39.0	114		-	-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	36.4	51.0	140		-	-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	ND	36.4	122F	**335**	Q	-	-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	35.2	49.5	141		-	-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	35.1	47.7	136		-	-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	33.9	29.4	87		-	-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	34.4	26.9	78		-	-		52-156	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	364	477	131		-	-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	364	475	131		-	-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	364	433	119		-	-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	364	428	118		-	-		66-176	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**174**	Q			10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**144**	Q			12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**174**	Q			14-147

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 QC Batch ID: WG1484163-3 QC Sample: L2116995-08 Client ID: MW-BS15-04052021

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	79				10-165
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	57				10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	57				10-189
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	78				27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	75				24-116
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	49				10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	52				10-161
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	80				55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	79				62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	67				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	78				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	102				71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	96				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	122				22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	76				10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	86				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**59**	Q			62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	78				10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	87				69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	80				62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	67				59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	82				70-131

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: MW-BM15-04052021						
Perfluorobutanoic Acid (PFBA)	ND	ND	ng/l	NC		30
Perfluoropentanoic Acid (PFPeA)	ND	ND	ng/l	NC		30
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/l	NC		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	ng/l	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/l	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	0.914JF	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: MW-BM15-04052021						
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	ND	ng/l	NC		30
Perfluorooctadecanoic Acid (PFODA)	ND	ND	ng/l	NC		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	79		84		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**61**	Q	68		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91		92		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	143	Q	122		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	72		75		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	87		87		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	114		115		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	89		91		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**198**	Q	**184**	Q	14-147

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: MW-BM15-04052021

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	74		78		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		96		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	80		91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**200**	Q	**187**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	62		73		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		90		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	85		89		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	99		105		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	99		114		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	75		76		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	67		72		10-206

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 08-10,12 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: MW-BM15-04052021						
Perfluorooctanesulfonamide (FOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		70		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	36		35		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	28		29		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	48		50		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	44		45		10-187

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-01
Date Collected: 04/05/21 11:55
Client ID: GZW-9-1-04052021
Date Received: 04/05/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 05:41	44,353.2	MR
Nitrogen, Nitrate	4.3		mg/l	0.10	0.023	1	-	04/07/21 05:41	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-02
Client ID: MW-S36-04052021
Sample Location: CONCORD, MA
Date Collected: 04/05/21 11:55
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 05:42	44,353.2	MR
Nitrogen, Nitrate	0.34		mg/l	0.10	0.023	1	-	04/07/21 05:42	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2116995
Project Number: 3252H
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-03
Date Collected: 04/05/21 12:15
Client ID: MW-S07-04052021
Date Received: 04/05/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 05:43	44,353.2	MR
Nitrogen, Nitrate	2.6		mg/l	0.10	0.023	1	-	04/07/21 05:43	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-04
Client ID: HA20-CMT-3B(OW)-04052021
Sample Location: CONCORD, MA
Date Collected: 04/05/21 14:00
Date Received: 04/05/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	123.		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	0.19		mg/l	0.050	0.014	1	-	04/07/21 05:45	44,353.2	MR
Nitrogen, Nitrate	1.1		mg/l	0.10	0.023	1	-	04/07/21 05:45	44,353.2	MR
Phosphorus, Total	0.063		mg/l	0.010	0.004	1	04/13/21 09:15	04/13/21 14:32	121,4500P-E	SD
Phosphorus, Orthophosphate	0.017		mg/l	0.005	0.001	1	-	04/06/21 21:52	121,4500P-E	AS
Dissolved Organic Carbon	3.4		mg/l	2.0	0.09	2	-	04/19/21 08:16	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	43.7		mg/l	0.500	0.083	1	-	04/12/21 18:35	44,300.0	AT
Fluoride	0.360		mg/l	0.050	0.037	1	-	04/12/21 18:35	44,300.0	AT
Sulfate	71.3		mg/l	1.00	0.454	1	-	04/12/21 18:35	44,300.0	AT

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-05	Date Collected:	04/05/21 14:25
Client ID:	MW-SD29-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.016	J	mg/l	0.050	0.014	1	-	04/07/21 05:55	44,353.2	MR
Nitrogen, Nitrate	1.8		mg/l	0.10	0.023	1	-	04/07/21 05:55	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-06 Date Collected: 04/05/21 15:20
Client ID: MW-SD36-04052021 Date Received: 04/05/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.021	J	mg/l	0.050	0.014	1	-	04/07/21 05:56	44,353.2	MR
Nitrogen, Nitrate	0.046	J	mg/l	0.10	0.023	1	-	04/07/21 05:56	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-07
Client ID: MW-SD60-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 15:05
Date Received: 04/05/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	23.8		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	0.015	J	mg/l	0.050	0.014	1	-	04/07/21 05:57	44,353.2	MR
Nitrogen, Nitrate	1.6		mg/l	0.10	0.023	1	-	04/07/21 05:57	44,353.2	MR
Phosphorus, Total	0.010		mg/l	0.010	0.004	1	04/13/21 09:15	04/13/21 14:36	121,4500P-E	SD
Phosphorus, Orthophosphate	0.003	J	mg/l	0.005	0.001	1	-	04/06/21 21:53	121,4500P-E	AS
Dissolved Organic Carbon	0.54	J	mg/l	1.0	0.04	1	-	04/19/21 08:43	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	66.9		mg/l	5.00	0.839	10	-	04/12/21 22:15	44,300.0	AT
Fluoride	0.049	J	mg/l	0.050	0.037	1	-	04/12/21 18:46	44,300.0	AT
Sulfate	23.2		mg/l	1.00	0.454	1	-	04/12/21 18:46	44,300.0	AT

Project Name: NUCLEAR METALS | **Lab Number:** L2116995
Project Number: 3252H | **Report Date:** 04/19/21

SAMPLE RESULTS

Lab ID: L2116995-08
Client ID: MW-BS15-04052021
Sample Location: CONCORD, MA
Date Collected: 04/05/21 12:40
Date Received: 04/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.19		mg/l	0.050	0.014	1	-	04/07/21 05:59	44,353.2	MR
Nitrogen, Nitrate	0.92		mg/l	0.10	0.023	1	-	04/07/21 05:59	44,353.2	MR

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

SAMPLE RESULTS

Lab ID:	L2116995-09	Date Collected:	04/05/21 14:00
Client ID:	MW-BM15-04052021	Date Received:	04/05/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:00	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/07/21 06:00	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2116995
Report Date: 04/19/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 04,07 Batch: WG1483144-1										
Phosphorus, Orthophosphate	0.002	J	mg/l	0.005	0.001	1	-	04/06/21 21:51	121,4500P-E	AS
General Chemistry - Westborough Lab for sample(s): 01-09 Batch: WG1483188-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 05:21	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-09 Batch: WG1483189-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/07/21 05:19	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab for sample(s): 04,07 Batch: WG1485395-1										
Chloride	0.093	J	mg/l	0.500	0.083	1	-	04/12/21 16:35	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/12/21 16:35	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/12/21 16:35	44,300.0	AT
General Chemistry - Westborough Lab for sample(s): 04,07 Batch: WG1485509-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/13/21 09:15	04/13/21 14:30	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 04,07 Batch: WG1486666-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 04,07 Batch: WG1486668-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 04,07 Batch: WG1486943-1										
Dissolved Organic Carbon	0.05	J	mg/l	1.0	0.04	1	-	04/19/21 07:15	1,9060A	DW

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04,07 Batch: WG1483144-2								
Phosphorus, Orthophosphate	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-09 Batch: WG1483188-2								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-09 Batch: WG1483189-2								
Nitrogen, Nitrate	96		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 04,07 Batch: WG1485395-2								
Chloride	101		-		90-110	-		
Fluoride	99		-		90-110	-		
Sulfate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 04,07 Batch: WG1485509-2								
Phosphorus, Total	103		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 04,07 Batch: WG1486943-2								
Dissolved Organic Carbon	98		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1483188-4 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021												
Nitrogen, Nitrite	0.19	4	4.9	118		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1483189-4 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021												
Nitrogen, Nitrate	1.1	4	5.3	105		-	-		83-113	-		6
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 04,07 QC Batch ID: WG1485395-3 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021												
Chloride	43.7	4	46.2	**63**	Q	-	-		90-110	-		18
Fluoride	0.360	0.4	0.768	102		-	-		90-110	-		15
Sulfate	71.3	8	76.7	**67**	Q	-	-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 04,07 QC Batch ID: WG1485509-3 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021												
Phosphorus, Total	0.063	0.5	0.565	100		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1483188-3 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021						
Nitrogen, Nitrite	0.19	0.18	mg/l	5		20
General Chemistry - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1483189-3 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021						
Nitrogen, Nitrate	1.1	1.0	mg/l	**10**	Q	6
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 04,07 QC Batch ID: WG1485395-4 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021						
Chloride	43.7	44.0	mg/l	1		18
Fluoride	0.360	0.374	mg/l	4		15
Sulfate	71.3	71.8	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 04,07 QC Batch ID: WG1485509-4 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021						
Phosphorus, Total	0.063	0.061	mg/l	3		20
General Chemistry - Westborough Lab Associated sample(s): 04,07 QC Batch ID: WG1486666-2 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021						
Alkalinity, Carbonate	ND	ND	mg CaCO3/L	NC		10
General Chemistry - Westborough Lab Associated sample(s): 04,07 QC Batch ID: WG1486668-2 QC Sample: L2116995-04 Client ID: HA20-CMT-3B(OW)-04052021						
Alkalinity, Bicarbonate	123.	123	mg CaCO3/L	0		9

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2116995-01A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-01B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-01C	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-01D	Plastic 120ml unpreserved	C	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2116995-01E	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-01F	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-01G	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-01H	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-02A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-02B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-02C	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-02D	Plastic 120ml unpreserved	C	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2116995-02E	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-02F	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-02G	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-02H	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-03A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-03B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-03C	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-03D	Plastic 120ml unpreserved	C	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2116995-03E	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Serial_No:04192119:47

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2116995-03F	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-03G	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-03H	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-04A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-04B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-04C	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-04D	Vial H2SO4 preserved	C	NA		4.4	Y	Absent		DOC-9060(28)
L2116995-04E	Vial H2SO4 preserved	B	NA		2.5	Y	Absent		DOC-9060(28)
L2116995-04F	Vial H2SO4 preserved	C	NA		4.4	Y	Absent		DOC-9060(28)
L2116995-04G	Plastic 250ml unpreserved/No Headspace	C	NA		4.4	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2116995-04H	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-04I	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-04J	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-04K	Amber 250ml unpreserved	C	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-04L	Plastic 250ml H2SO4 preserved	C	<2	<2	4.4	Y	Absent		TPHOS-4500(28)
L2116995-04M	Plastic 500ml unpreserved	B	7	7	2.5	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),HOLD-WETCHEM(),NO2-353(2),NO3-353(2)
L2116995-05A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-05B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-05C	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-05D	Plastic 120ml unpreserved	B	7	7	2.5	Y	Absent		NO2-353(2),NO3-353(2)
L2116995-05E	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-05F	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-05G	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-05H	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-06A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-06B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-06C	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2116995
Report Date: 04/19/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2116995-06D	Plastic 120ml unpreserved	B	7	7	2.5	Y	Absent		NO2-353(2),NO3-353(2)
L2116995-06E	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-06F	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-06G	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-06H	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-07A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-07B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-07C	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-07D	Vial H2SO4 preserved	B	NA		2.5	Y	Absent		DOC-9060(28)
L2116995-07E	Vial H2SO4 preserved	B	NA		2.5	Y	Absent		DOC-9060(28)
L2116995-07F	Vial H2SO4 preserved	B	NA		2.5	Y	Absent		DOC-9060(28)
L2116995-07G	Plastic 250ml unpreserved/No Headspace	B	NA		2.5	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2116995-07H	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-07I	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-07J	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-07K	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-07L	Plastic 250ml H2SO4 preserved	B	<2	<2	2.5	Y	Absent		TPHOS-4500(28)
L2116995-07M	Plastic 500ml unpreserved	B	7	7	2.5	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),HOLD-WETCHEM(),NO2-353(2),NO3-353(2)
L2116995-08A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-08B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-08C	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-08D	Plastic 120ml unpreserved	B	7	7	2.5	Y	Absent		NO2-353(2),NO3-353(2)
L2116995-08E	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-08F	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-08G	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-08H	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-08I	Plastic 250ml unpreserved	A	NA		3.8	Y	Absent		A2-537-ISOTOPE-36(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2116995-08J	Plastic 250ml unpreserved	A	NA		3.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2116995-09A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-09B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-09C	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-09D	Plastic 120ml unpreserved	B	7	7	2.5	Y	Absent		NO2-353(2),NO3-353(2)
L2116995-09E	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-09F	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2116995-09G	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-09H	Amber 250ml unpreserved	B	7	7	2.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2116995-09I	Plastic 250ml unpreserved	A	NA		3.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2116995-09J	Plastic 250ml unpreserved	A	NA		3.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2116995-10A	Plastic 250ml unpreserved	A	NA		3.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2116995-11A	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-11B	Vial HCl preserved	C	NA		4.4	Y	Absent		MCP-8260-10(14)
L2116995-12A	Plastic 250ml unpreserved	A	NA		3.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2116995-12B	Plastic 250ml unpreserved	A	NA		3.8	Y	Absent		A2-537-ISOTOPE-36(14)

Container Comments

L2116995-02A	Vial cap cracked, septa cap intact
L2116995-09I	Container Sample ID MW-S15-04052021
L2116995-09J	Container Sample ID MW-S15-04052021

*Values in parentheses indicate holding time in days

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name: NUCLEAR METALS **Lab Number:** L2116995
Project Number: 3252H **Report Date:** 04/19/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	NUCLEAR METALS	**Lab Number:**	L2116995
Project Number:	3252H	**Report Date:**	04/19/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 4/5/21

ALPHA Job #: L2116995

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
16995 -01	GZW-9-1-04052021	4/5/2021	11:55	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-02	MW-S36-04052021	4/5/2021	11:55	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-03	MW-S07-04052021	4/5/2021	12:15	GW	ZM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-04	HA20-CMT-3B(OW)-04052021	4/5/2021	14:00	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-05	MW-SD29-04052021	4/5/2021	14:25	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-06	MW-SD36-04052021	4/5/2021	15:20	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-07	MW-SD60-04052021	4/5/2021	15:05	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-08	MW-BS15-04052021	4/5/2021	12:40	GW	SRB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
-09	MW-BM15-04052021	4/5/2002	14:00	GW	SRB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
-10	Field Blank1-04052021	4/5/2021	13:00	GW	SRB	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		2
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	4/5/21 1037	MGM MULL AAL	4/5/21 1037
MGM	4/5/21 1720	Mylen Wood	4/5/21 1720

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01 (rev. 5-JAN-12)

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL

Westborough, MA — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA — TEL: 508-822-9300 — FAX: 508-822-3288

Date Rec'd in Lab: 4/5/21

ALPHA Job #: L2116995

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

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Client: de maximis, Inc.

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Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program	Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
16995-11	Trip Blank1-04052021	3/30/21	–	TB	PC	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		2
-12	EQ Blank1-04052021	4/5/2021	16:30	GW	NH	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐		2
Container Type						V	A	A	P	P	P	V	P	P	P	-	-		
Preservative						B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	4/5/21 1637	[illegible]	4/5/21 1637
[illegible]	4/5/21 1720	[illegible]	4/5/21 1720

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Method Blank Summary
Form 4
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2116995
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Lab Sample ID	: WG1486072-5	**Lab File ID**	: VQ210414A04
Instrument ID	: QUIMBY		
Matrix	: WATER	**Analysis Date**	: 04/14/21 04:41

Client Sample No.	Lab Sample ID	Analysis Date
WG1486072-3LCS	WG1486072-3	04/14/21 03:10
WG1486072-4LCSD	WG1486072-4	04/14/21 03:40
TRIP BLANK1-04052021	L2116995-11	04/14/21 05:11
GZW-9-1-04052021	L2116995-01	04/14/21 05:41
MW-S36-04052021	L2116995-02	04/14/21 06:12
MW-S07-04052021	L2116995-03	04/14/21 06:42
HA20-CMT-3B(OW)-04052021	L2116995-04	04/14/21 07:12
MW-SD29-04052021	L2116995-05	04/14/21 07:42
MW-SD36-04052021	L2116995-06	04/14/21 08:12
MW-SD60-04052021	L2116995-07	04/14/21 08:43
MW-BS15-04052021	L2116995-08	04/14/21 09:13
MW-BM15-04052021	L2116995-09	04/14/21 09:43

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2116995	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: QUIMBY	Calibration Date	: 04/14/21 03:10	
Lab File ID	: VQ210414A01	Init. Calib. Date(s)	: 04/11/21	04/11/21
Sample No	: WG1486072-2	Init. Calib. Times	: 16:44	21:47
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	96	0
Dichlorodifluoromethane	0.715	0.758	-	-6	20	95	0
Chloromethane	1.089	1.173	-	-7.7	20	99	0
Vinyl chloride	0.844	0.916	-	-8.5	20	97	0
Bromomethane	0.461	0.529	-	-14.8	20	105	0
Chloroethane	0.521	0.567	-	-8.8	20	99	0
Trichlorofluoromethane	1.198	1.259	-	-5.1	20	96	0
Ethyl ether	0.275	0.316	-	-14.9	20	108	0
1,1-Dichloroethene	0.654	0.693	-	-6	20	98	0
Carbon disulfide	1.842	1.926	-	-4.6	20	97	0
Freon-113	0.676	0.723	-	-7	20	95	0
Iodomethane	0.871	0.798	-	8.4	20	89	0
Methylene chloride	0.709	0.781	-	-10.2	20	101	0
Acetone	10	11.893	-	-18.9	20	115	0
trans-1,2-Dichloroethene	0.781	0.82	-	-5	20	96	0
Methyl acetate	0.359	0.411	-	-14.5	20	111	0
Methyl tert-butyl ether	1.417	1.6	-	-12.9	20	108	0
tert-Butyl alcohol	0.032	0.037*	-	-15.6	20	116	0
Diisopropyl ether	2.883	3.246	-	-12.6	20	106	0
1,1-Dichloroethane	1.547	1.674	-	-8.2	20	99	0
Halothane	0.653	0.687	-	-5.2	20	96	0
Acrylonitrile	0.149	0.177	-	-18.8	20	112	0
Ethyl tert-butyl ether	2.062	2.338	-	-13.4	20	107	0
Vinyl acetate	1.554	1.842	-	-18.5	20	112	0
cis-1,2-Dichloroethene	0.828	0.898	-	-8.5	20	100	0
2,2-Dichloropropane	1.253	1.443	-	-15.2	20	106	0
Bromochloromethane	0.339	0.382	-	-12.7	20	103	0
Cyclohexane	1.756	1.678	-	4.4	20	90	0
Chloroform	1.426	1.523	-	-6.8	20	99	0
Ethyl acetate	0.479	0.565	-	-18	20	112	0
Carbon tetrachloride	1.277	1.35	-	-5.7	20	96	0
Tetrahydrofuran	0.171	0.198	-	-15.8	20	112	0
Dibromofluoromethane	0.291	0.301	-	-3.4	20	99	0
1,1,1-Trichloroethane	1.461	1.529	-	-4.7	20	96	0
2-Butanone	0.19	0.227	-	-19.5	20	110	0
1,1-Dichloropropene	1.115	1.163	-	-4.3	20	96	0
Benzene	3.027	3.296	-	-8.9	20	99	0
tert-Amyl methyl ether	1.521	1.707	-	-12.2	20	107	0
1,2-Dichloroethane-d4	0.282	0.284	-	-0.7	20	101	0
1,2-Dichloroethane	0.858	0.966	-	-12.6	20	105	0
Methyl cyclohexane	1.55	1.463	-	5.6	20	88	0
Trichloroethene	0.896	0.925	-	-3.2	20	99	0
Dibromomethane	0.344	0.387	-	-12.5	20	103	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2116995
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Instrument ID	: QUIMBY	**Calibration Date**	: 04/14/21 03:10
Lab File ID	: VQ210414A01	**Init. Calib. Date(s)**	: 04/11/21 04/11/21
Sample No	: WG1486072-2	**Init. Calib. Times**	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.753	0.832	-	-10.5	20	102	0
Bromodichloromethane	0.987	1.085	-	-9.9	20	102	0
1,4-Dioxane	0.00307	0.00336*	-	-9.4	20	105	0
cis-1,3-Dichloropropene	1.059	1.239	-	-17	20	110	0
Chlorobenzene-d5	1	1	-	0	20	104	0
Toluene-d8	1.077	1.031	-	4.3	20	101	0
Toluene	1.629	1.631	-	-0.1	20	99	0
4-Methyl-2-pentanone	10	9.255	-	7.4	20	108	0
Tetrachloroethene	0.709	0.666	-	6.1	20	94	0
trans-1,3-Dichloropropene	0.736	0.761	-	-3.4	20	107	0
Ethyl methacrylate	10	9.526	-	4.7	20	109	0
1,1,2-Trichloroethane	0.325	0.335	-	-3.1	20	104	0
Chlorodibromomethane	0.512	0.522	-	-2	20	105	0
1,3-Dichloropropane	0.692	0.708	-	-2.3	20	105	0
1,2-Dibromoethane	0.368	0.372	-	-1.1	20	105	0
2-Hexanone	10	9.564	-	4.4	20	112	0
Chlorobenzene	1.757	1.774	-	-1	20	101	0
Ethylbenzene	3.145	3.197	-	-1.7	20	97	0
1,1,1,2-Tetrachloroethane	0.626	0.628	-	-0.3	20	102	0
p/m Xylene	20	18.374	-	8.1	20	95	0
o Xylene	20	18.735	-	6.3	20	97	0
Styrene	20	19.279	-	3.6	20	101	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	102	0
Bromoform	0.517	0.56	-	-8.3	20	106	0
Isopropylbenzene	6.172	6.218	-	-0.7	20	92	0
4-Bromofluorobenzene	0.997	1.042	-	-4.5	20	106	0
Bromobenzene	1.257	1.352	-	-7.6	20	103	0
n-Propylbenzene	6.845	6.589	-	3.7	20	92	0
1,4-Dichlorobutane	1.486	1.64	-	-10.4	20	107	0
1,1,2,2-Tetrachloroethane	0.764	0.845	-	-10.6	20	107	0
4-Ethyltoluene	5.065	4.788	-	5.5	20	92	0
2-Chlorotoluene	4.764	4.756	-	0.2	20	96	0
1,3,5-Trimethylbenzene	3.876	3.664	-	5.5	20	93	0
1,2,3-Trichloropropane	0.635	0.715	-	-12.6	20	109	0
trans-1,4-Dichloro-2-buten	0.258	0.292	-	-13.2	20	115	0
4-Chlorotoluene	4.01	4.025	-	-0.4	20	98	0
tert-Butylbenzene	4.263	3.987	-	6.5	20	89	0
1,2,4-Trimethylbenzene	3.462	3.365	-	2.8	20	95	0
sec-Butylbenzene	5.424	5.032	-	7.2	20	89	0
p-Isopropyltoluene	10	8.333	-	16.7	20	89	0
1,3-Dichlorobenzene	2.441	2.464	-	-0.9	20	97	0
1,4-Dichlorobenzene	2.306	2.32	-	-0.6	20	99	0
p-Diethylbenzene	2.449	2.152	-	12.1	20	92	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2116995
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Instrument ID	: QUIMBY	**Calibration Date**	: 04/14/21 03:10
Lab File ID	: VQ210414A01	**Init. Calib. Date(s)**	: 04/11/21 04/11/21
Sample No	: WG1486072-2	**Init. Calib. Times**	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
n-Butylbenzene	10	8.704	-	13	20	91	0
1,2-Dichlorobenzene	2.108	2.194	-	-4.1	20	100	0
1,2,4,5-Tetramethylbenzene	2.863	3.468	-	-21.1*	20	100	0
1,2-Dibromo-3-chloropropan	0.11	0.118	-	-7.3	20	104	0
1,3,5-Trichlorobenzene	1.16	1.174	-	-1.2	20	100	0
Hexachlorobutadiene	0.787	0.7	-	11.1	20	91	0
1,2,4-Trichlorobenzene	0.939	0.942	-	-0.3	20	105	0
Naphthalene	1.416	1.584	-	-11.9	20	108	0
1,2,3-Trichlorobenzene	0.783	0.858	-	-9.6	20	104	0

*** Value outside of QC limits.**

ANALYTICAL REPORT

Lab Number:	L2117259
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	3252H
Report Date:	05/05/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2117259-01	HA20-CMT3T(OW)-04052021	WATER	CONCORD, MA	04/05/21 16:45	04/06/21
L2117259-02	GZW-9-2-04052021	WATER	CONCORD, MA	04/05/21 16:50	04/06/21
L2117259-03	MW-S15-04052021	WATER	CONCORD, MA	04/05/21 17:00	04/06/21
L2117259-04	MW-S60-04052021	WATER	CONCORD, MA	04/05/21 17:25	04/06/21
L2117259-05	EQ BLANK1-04062021	WATER	CONCORD, MA	04/06/21 09:00	04/06/21
L2117259-06	TRIPBLANK1-04062021	WATER	CONCORD, MA	04/06/21 00:00	04/06/21
L2117259-07	MW-S29-04062021	WATER	CONCORD, MA	04/06/21 09:45	04/06/21
L2117259-08	HA20-CMT-6(OW)-04062021	WATER	CONCORD, MA	04/06/21 10:25	04/06/21
L2117259-09	MW-8A-04062021	WATER	CONCORD, MA	04/06/21 10:40	04/06/21
L2117259-10	MW-BS36-04062021	WATER	CONCORD, MA	04/06/21 10:40	04/06/21
L2117259-11	HA20-CMT-5(OW)-04062021	WATER	CONCORD, MA	04/06/21 10:45	04/06/21
L2117259-12	HA20-CMT-5(OW)-04062021 DUP	WATER	CONCORD, MA	04/06/21 11:15	04/06/21
L2117259-13	MW-BS31-04062021	WATER	CONCORD, MA	04/06/21 10:50	04/06/21
L2117259-14	MW-S17-04062021	WATER	CONCORD, MA	04/06/21 11:35	04/06/21
L2117259-15	MW-BS22-04062021	WATER	CONCORD, MA	04/06/21 09:45	04/06/21
L2117259-16	MW-S22-04062021	WATER	CONCORD, MA	04/06/21 12:10	04/06/21
L2117259-17	MW-S28-04062021	WATER	CONCORD, MA	04/06/21 12:45	04/06/21
L2117259-18	MW-BS50-04062021	WATER	CONCORD, MA	04/06/21 13:05	04/06/21
L2117259-19	HB-620-04062021	WATER	CONCORD, MA	04/06/21 13:50	04/06/21
L2117259-20	HB-12-04062021	WATER	CONCORD, MA	04/06/21 14:10	04/06/21
L2117259-21	EQ BLANK2-04062021	WATER	CONCORD, MA	04/06/21 14:00	04/06/21
L2117259-22	MW-S39-04062021	WATER	CONCORD, MA	04/06/21 13:10	04/06/21
L2117259-23	MW-S39-04062021 DUP	WATER	CONCORD, MA	04/06/21 13:15	04/06/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2117259-24	MW-SD39-04062021	WATER	CONCORD, MA	04/06/21 15:00	04/06/21
L2117259-25	MW-SD17-04062021	WATER	CONCORD, MA	04/06/21 15:25	04/06/21
L2117259-26	MW-SD61-04062021	WATER	CONCORD, MA	04/06/21 14:45	04/06/21
L2117259-27	MW-S12-04062021	WATER	CONCORD, MA	04/06/21 15:30	04/06/21
L2117259-28	FIELD BLANK1-04062021	WATER	CONCORD, MA	04/06/21 15:45	04/06/21
L2117259-29	OW-2-04062021	WATER	CONCORD, MA	04/06/21 16:05	04/06/21
L2117259-30	MW-S24-04062021	WATER	CONCORD, MA	04/06/21 16:40	04/06/21

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives
Volatile Organics
L2117259-01 through -14, -17, -25, -26, -29 and -30: Initial calibration utilized a quadratic fit for: n-butylbenzene, p-isopropyltoluene
L2117259-01, -02, -03, -04, -05, -07, -08, -09, -10, and -14: A copy of the continuing calibration standard is included as an addendum to this report.
In reference to question H:
L2117259-27: The surrogate recovery is above the acceptance criteria for 1,2-dichloroethane-d4 (139%) and dibromofluoromethane (141%). Since the sample was non-detect for all target analytes, re-analysis was not required.
The WG1487356-3/-4 LCS/LCSD recoveries, associated with L2117259-15, -16, -18, -19, -20, -22, -23, -24, and -27, are below the individual acceptance criteria for dichlorodifluoromethane (60%/64%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.
The WG1487616-3 LCS recovery, associated with L2117259-06, -11, -12, -13, -17, -29, and -30, is above the individual acceptance criteria for 1,2,3-trichloropropane (140%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for this compound.
The WG1487775-3/-4 LCS/LCSD recoveries, associated with L2117259-25 and -26, are below the individual acceptance criteria for bromomethane (68%/69%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.
The WG1487616-6 MS recovery, performed on L2117259-17, is below the acceptance criteria for

Case Narrative (continued)

bromomethane (63%); however, the associated LCS/LCSD recoveries are within overall method allowances. No further action was required.

The WG1487616-7 MSD recovery, performed on L2117259-17, is outside the acceptance criteria for 1,2,3-trichloropropane (140%); however, the associated LCS/LCSD recoveries are within overall method allowances. No further action was required.

The WG1487616-6/-7 MS/MSD RPD, performed on L2117259-17, is outside the acceptance criteria for bromomethane (21%).

L2117259-01 through -14, -17, -25, -26, -29, and -30: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0025)

Average Response Factor: 1,4-dioxane

L2117259-06, -11, -12, -13, -17, -29, and -30: Initial Calibration did not meet:

L2117259-15, -16, -18, -19, -20, -22, -23, -24, and -27: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0095)

Average Response Factor: 1,4-dioxane

L2117259-06, -11, -12, -13, -15, -16, -17, -18, -19, -20, -22, -23, -24, -25, -26, -27, -29, and -30: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

Semivolatile Organics

L2117259-01, -02, -03, -04, -05, -07, -08, -09, -11, -12, -13, -14, -15, -16, -17, -18, -23, -24, -25, -26, -27, -29, -30, WG1484239-1, WG1484239-2, WG1484239-3, WG1485004-1, WG1485004-2, WG1485004-3, WG1485004-4, WG1485004-5, WG1485004-6, WG1485004-7, WG1485277-3: The initial calibration utilized a quadratic fit for Butyl benzyl phthalate, Bis(2-ethylhexyl)phthalate, Di-n-octylphthalate.

In reference to question H:

The WG1484239-1 Method Blank, associated with L2117259-01, -02, -03, -04, -05, -07, and -15, has a concentration above the reporting limit for Bis(2-ethylhexyl)phthalate. Since the samples were non-detect to

Case Narrative (continued)

the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.
The WG1485277-1 Method Blank, associated with L2117259-10, has a concentration above the reporting limit for Naphthalene. Since the sample was non-detect to the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.
The WG1484239-2/-3 LCS/LCSD recoveries, associated with L2117259-01, -02, -03, -04, -05, -07, and -15, are below the individual acceptance criteria for aniline (28%/32%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.
The WG1484239-2/-3 LCS/LCSD RPDs, associated with L2117259-01, -02, -03, -04, -05, -07, and -15, are above the acceptance criteria for 1,3-dichlorobenzene (21%), hexachlorobutadiene (22%), hexachloroethane (21%) and naphthalene (21%).
The WG1485004-3 LCSD recovery, associated with L2117259-08, -09, -11, -12, -13, -14, -16, -17, -18, -19, -20, -22, -23, -24, -25, -26, -27, -29, and -30, is below the individual acceptance criteria for aniline (37%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.
The WG1485004-3 LCS/LCSD RPD(s), associated with L2117259-08, -09, -11, -12, -13, -14, -16, -17, -18, -19, -20, -22, -23, -24, -25, -26, -27, -29, and -30, are above the acceptance criteria for benzoic acid (23%) and pyridine (52%).
The WG1485277-2/-3 LCS/LCSD recoveries, associated with L2117259-10, are below the individual acceptance criteria for aniline (31%/25%) and 4-chloroaniline (LCS 34%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.
The WG1485277-2/-3 LCS/LCSD RPDs, associated with L2117259-10, are above the acceptance criteria for hexachlorobenzene (21%), 2,4-dinitrotoluene (22%), 2,6-dinitrotoluene (28%), azobenzene (21%), fluoranthene (25%), 4-bromophenyl phenyl ether (21%), naphthalene (23%), bis(2-ethylhexyl)phthalate (25%), butyl benzyl phthalate (27%), di-n-butylphthalate (27%), di-n-octylphthalate (27%), diethyl phthalate (26%), dimethyl phthalate (23%), benzo(a)pyrene (23%), benzo(b)fluoranthene (24%), benzo(k)fluoranthene (25%),

Case Narrative (continued)

acenaphthylene (23%), anthracene (22%), benzo(ghi)perylene (24%), phenanthrene (21%), dibenzo(a,h)anthracene (21%), indeno(1,2,3-cd)pyrene (22%), pyrene (25%), aniline (21%), 2,4,6-trichlorophenol (24%), 4-nitrophenol (32%), 2,4-dinitrophenol (30%), pentachlorophenol (30%) and 2,4,5-trichlorophenol (24%).

The WG1485004-4/-5 MS/MSD recoveries, performed on L2117259-14, are outside the acceptance criteria for aniline (14%/22%).

The WG1485004-4/-5 MS/MSD RPD, performed on L2117259-14, is outside the acceptance criteria for aniline (42%).

The WG1485004-6 MS recovery, performed on L2117259-17, is outside the acceptance criteria for aniline (26%).

The WG1485004-6/-7 MS/MSD RPDs, performed on L2117259-17, are outside the acceptance criteria for bis(2-chloroisopropyl)ether (24%), aniline (49%), and acetophenone (24%).

Semivolatile Organics by SIM

L2117259-01, -02, -04, -05, -07, -08, -09, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -20, -22, -23, -24, -25RE, -25, -26, -27, -29, -30, WG1484244-2, WG1485070-1,WG1485070-6, WG1484244-3, WG1485070-2, WG1485070-3, WG1485070-4, WG1485070-5, WG1485070-7, WG1485279-1, WG1485279-2, WG1485279-3, WG1488688-1, WG1488688-2, and WG1488688-3: The initial calibration utilized a quadratic fit for Pentachlorophenol.

In reference to question H:

L2117259-25: The internal standard (IS) response(s) for Chrysene-d12 (20%) and Perylene-d12 (0%) were below the acceptance criteria; however, the criteria were achieved upon re-analysis outside of holding time. The results of both analyses are reported; however, since the IS response was below method criteria, all associated compounds are considered to have a potentially high bias.

L2117259-25: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (187%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Case Narrative (continued)

The WG1485279-1 Method Blank, associated with L2117259-10, has a concentration above the reporting limit for Acenaphthene, Naphthalene and 2-Methylnaphthalene. Since the sample was non-detect to the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.
The WG1485070-2/-3 LCS/LCSD RPD, associated with L2117259-08, -09, -11, -12, -13, -14, -16, -17, -18, -19, -20, -22, -23, -24, -26, -27, -29, and -30, are above the acceptance criteria for pentachlorophenol (21%).
The WG1485070-6/-7 MS/MSD RPD, performed on L2117259-17, is outside the acceptance criteria for pentachlorophenol (21%).
WG1485279-2: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (117%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
WG1488688-1: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (113%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The WG1488688-2/-3 LCS/LCSD RPD, associated with L2117259-25RE, is above the acceptance criteria for naphthalene (21%).

Perfluorinated Alkyl Acids by Isotope Dilution
L2117259-03, -21, -27, -28, WG1484163-1, WG1484163-2: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.
L2117259-03, -21, -27, and -28: The MeOH fraction of the extraction is reported for the following compounds: Perfluorooctanesulfonamide (FOSA), N-Methyl Perfluorooctane Sulfonamide (NMeFOSA), N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA), N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE), and N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).
The WG1484163-1 Method Blank, associated with L2117259-03, -21, -27, and -28, has a concentration

Case Narrative (continued)

above the reporting limit for NEtFOSAA. Since the sample(s) were non-detect to the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.
The WG1484163-2 LCS recovery, associated with L2117259-03, -21, -27, and -28, is above the acceptance criteria for perfluorooctadecanoic acid (pfoda) (229%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

Non-MCP Related Narratives
Nitrogen, Nitrate
The WG1483191-4 MS recovery for nitrogen, nitrate (0%), performed on L2117259-01, does not apply because the sample concentration is greater than four times the spike amount added.

Dissolved Organic Carbon
The samples were field filtered; a filter blank was not received.
The WG1486448-4 MS recovery, performed on L2117259-04, is outside the acceptance criteria for dissolved organic carbon (132%); however, the associated LCS recovery is within criteria. No further action was taken.

Anions by Ion Chromatography
L2117259-13 was analyzed with the method required holding time exceeded.
The WG1485396-3 MS recoveries, performed on L2117259-20, are outside the acceptance criteria for sulfate (89%) and chloride (70%); however, the associated LCS recovery is within criteria. No further action was taken.
The WG1494273-4 MS recovery, performed on L2117259-18, is outside the acceptance criteria for fluoride (81%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Jennifer L Clements

Title: Technical Director/Representative Date: 05/05/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	MW-S12-04062021	L2117259-27	1,2-Dichloroethane-d4	Surrogate	139	70-130	-	potential high bias
8260C	MW-S12-04062021	L2117259-27	Dibromofluoromethane	Surrogate	141	70-130	-	potential high bias
8260C	Batch QC	WG1487356-3	Dichlorodifluoromethane	LCS	60	70-130	15-16,18-20,22-24,27	potential low bias
8260C	Batch QC	WG1487356-4	Dichlorodifluoromethane	LCSD	64	70-130	15-16,18-20,22-24,27	potential low bias
8260C	Batch QC	WG1487616-3	1,2,3-Trichloropropane	LCS	140	70-130	06,11-13,17,29-30	potential high bias
8260C	Batch QC (L2117259-17)	WG1487616-6	Bromomethane	MS	63	70-130	06,11-13,17,29-30	potential low bias
8260C	Batch QC (L2117259-17)	WG1487616-7	Bromomethane	MSD	21	20	06,11-13,17,29-30	non-directional bias
8260C	Batch QC (L2117259-17)	WG1487616-7	1,2,3-Trichloropropane	MSD	140	70-130	06,11-13,17,29-30	potential high bias
8260C	Batch QC	WG1487775-3	Bromomethane	LCS	68	70-130	25-26	potential low bias
8260C	Batch QC	WG1487775-4	Bromomethane	LCSD	69	70-130	25-26	potential low bias
MCP Semivolatile Organics - Westborough Lab								
8270D	Batch QC	WG1484239-2	Aniline	LCS	28	40-140	01-05,07,15	potential low bias
8270D	Batch QC	WG1484239-3	1,3-Dichlorobenzene	LCSD	21	20	01-05,07,15	non-directional bias
8270D	Batch QC	WG1484239-3	Hexachlorobutadiene	LCSD	22	20	01-05,07,15	non-directional bias
8270D	Batch QC	WG1484239-3	Hexachloroethane	LCSD	21	20	01-05,07,15	non-directional bias
8270D	Batch QC	WG1484239-3	Naphthalene	LCSD	21	20	01-05,07,15	non-directional bias
8270D	Batch QC	WG1484239-3	Aniline	LCSD	32	40-140	01-05,07,15	potential low bias
8270D	Batch QC	WG1485004-3	Aniline	LCSD	37	40-140	08-09,11-14,16-20,22-27,29-30	potential low bias
8270D	Batch QC (L2117259-14)	WG1485004-4	Aniline	MS	14	40-140	08-09,11-14,16-20,22-27,29-30	potential low bias
8270D	Batch QC (L2117259-14)	WG1485004-5	Aniline	MSD	22	40-140	08-09,11-14,16-20,22-27,29-30	potential low bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC (L2117259-14)	WG1485004-5	Aniline	MSD	42	20	08-09,11-14,16-20,22-27,29-30	non-directional bias
8270D	Batch QC (L2117259-17)	WG1485004-6	Aniline	MS	26	40-140	08-09,11-14,16-20,22-27,29-30	potential low bias
8270D	Batch QC (L2117259-17)	WG1485004-7	Bis(2-chloroisopropyl)ether	MSD	24	20	08-09,11-14,16-20,22-27,29-30	non-directional bias
8270D	Batch QC (L2117259-17)	WG1485004-7	Aniline	MSD	49	20	08-09,11-14,16-20,22-27,29-30	non-directional bias
8270D	Batch QC (L2117259-17)	WG1485004-7	Acetophenone	MSD	24	20	08-09,11-14,16-20,22-27,29-30	non-directional bias
8270D	Batch QC	WG1485277-2	Aniline	LCS	31	40-140	10	potential low bias
8270D	Batch QC	WG1485277-2	4-Chloroaniline	LCS	34	40-140	10	potential low bias
8270D	Batch QC	WG1485277-3	Hexachlorobenzene	LCSD	21	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	2,4-Dinitrotoluene	LCSD	22	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	2,6-Dinitrotoluene	LCSD	28	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Azobenzene	LCSD	21	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Fluoranthene	LCSD	25	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	4-Bromophenyl phenyl ether	LCSD	21	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Naphthalene	LCSD	23	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Bis(2-ethylhexyl)phthalate	LCSD	25	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Butyl benzyl phthalate	LCSD	27	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Di-n-butylphthalate	LCSD	27	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Di-n-octylphthalate	LCSD	27	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Diethyl phthalate	LCSD	26	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Dimethyl phthalate	LCSD	23	20	10	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC	WG1485277-3	Benzo(a)pyrene	LCSD	23	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Benzo(b)fluoranthene	LCSD	24	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Benzo(k)fluoranthene	LCSD	25	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Acenaphthylene	LCSD	23	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Anthracene	LCSD	22	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Benzo(ghi)perylene	LCSD	24	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Phenanthrene	LCSD	21	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Dibenzo(a,h)anthracene	LCSD	21	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Indeno(1,2,3-cd)pyrene	LCSD	22	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Pyrene	LCSD	25	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Aniline	LCSD	21	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Aniline	LCSD	25	40-140	10	potential low bias
8270D	Batch QC	WG1485277-3	2,4,6-Trichlorophenol	LCSD	24	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	4-Nitrophenol	LCSD	32	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	2,4-Dinitrophenol	LCSD	30	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	Pentachlorophenol	LCSD	30	20	10	non-directional bias
8270D	Batch QC	WG1485277-3	2,4,5-Trichlorophenol	LCSD	24	20	10	non-directional bias
MCP Semivolatile Organics by SIM - Westborough Lab								
8270D-SIM	MW-SD17-04062021	L2117259-25	2,4,6-Tribromophenol	Surrogate	187	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1485070-3	Pentachlorophenol	LCSD	21	20	08-09,11-14,16-20,22-27,29-30	non-directional bias
8270D-SIM	Batch QC (L2117259-17)	WG1485070-7	Pentachlorophenol	MSD	21	20	08-09,11-14,16-20,22-27,29-30	non-directional bias
8270D-SIM	Batch QC	WG1485279-2	2,4,6-Tribromophenol	Surrogate	117	15-110	-	potential high bias
8270D-SIM	Laboratory Method Bl	WG1488688-1	2,4,6-Tribromophenol	Surrogate	113	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1488688-3	Naphthalene	LCSD	21	20	25	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab								
LCMSMS-ID	Batch QC	WG1484163-2	Perfluorooctadecanoic Acid (PFODA)	LCS	229	10-119	03,21,27-28	potential high bias
LCMSMS-ID	Batch QC (L2116995-08)	WG1484163-3	Perfluorooctadecanoic Acid (PFODA)	MS	335	10-119	03,21,27-28	potential high bias
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2117259-20)	WG1485396-3	Chloride	MS	70	90-110	20,26-27,30	potential low bias
300.0	Batch QC (L2117259-20)	WG1485396-3	Sulfate	MS	89	90-110	20,26-27,30	potential low bias
300.0	Batch QC (L2117259-18)	WG1494273-4	Fluoride	MS	81	90-110	13,18	potential low bias
General Chemistry - Westborough Lab								
353.2	Batch QC (L2117259-01)	WG1483191-4	Nitrogen, Nitrate	MS	0	83-113	01-05,07-11	potential low bias
9060A	Batch QC (L2117259-04)	WG1486448-4	Dissolved Organic Carbon	MS	132	80-120	01,04-05,08-09,11-12	potential high bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-01
Client ID: HA20-CMT3T(OW)-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 16:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 10:13
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	1.0		ug/l	1.0	0.21	1
Chloroform	2.4		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	1.1		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	4.7		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-01	Date Collected:	04/05/21 16:45
Client ID:	HA20-CMT3T(OW)-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	5.8		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-01	Date Collected:	04/05/21 16:45
Client ID:	HA20-CMT3T(OW)-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	97		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-02
Client ID: GZW-9-2-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 16:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 10:43
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-02	Date Collected:	04/05/21 16:50
Client ID:	GZW-9-2-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.24	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-02 Date Collected: 04/05/21 16:50
Client ID: GZW-9-2-04052021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	97		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-03	Date Collected:	04/05/21 17:00
Client ID:	MW-S15-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 11:13
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-03	Date Collected:	04/05/21 17:00
Client ID:	MW-S15-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-03
Client ID: MW-S15-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 17:00
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	96		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-04	Date Collected:	04/05/21 17:25
Client ID:	MW-S60-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 11:44
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.87	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-04	Date Collected:	04/05/21 17:25
Client ID:	MW-S60-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-04	Date Collected:	04/05/21 17:25
Client ID:	MW-S60-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	98		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-05
Client ID: EQ BLANK1-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 09:00
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 12:14
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-05 Date Collected: 04/06/21 09:00
Client ID: EQ BLANK1-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-05
Client ID: EQ BLANK1-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 09:00
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	97		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-06	Date Collected:	04/06/21 00:00
Client ID:	TRIPBLANK1-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:40
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-06	Date Collected:	04/06/21 00:00
Client ID:	TRIPBLANK1-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-06	Date Collected:	04/06/21 00:00
Client ID:	TRIPBLANK1-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	95		70-130

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-07
Client ID: MW-S29-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 09:45
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 12:44
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-07 Date Collected: 04/06/21 09:45
Client ID: MW-S29-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.30	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-07	Date Collected:	04/06/21 09:45
Client ID:	MW-S29-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	97		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-08	Date Collected:	04/06/21 10:25
Client ID:	HA20-CMT-6(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 13:14
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-08	Date Collected:	04/06/21 10:25
Client ID:	HA20-CMT-6(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-08 Date Collected: 04/06/21 10:25
Client ID: HA20-CMT-6(OW)-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	99		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-09
Client ID: MW-8A-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:40
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 13:45
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.98	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-09 Date Collected: 04/06/21 10:40
Client ID: MW-8A-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-09
Client ID: MW-8A-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:40
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	98		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-10
Client ID: MW-BS36-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:40
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 14:15
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-10
Client ID: MW-BS36-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 10:40
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.53	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	0.32	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.52	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.52	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-10	Date Collected:	04/06/21 10:40
Client ID:	MW-BS36-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	97		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-11
Client ID: HA20-CMT-5(OW)-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 11:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.43	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	0.16	J	ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	0.22	J	ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-11	Date Collected:	04/06/21 10:45
Client ID:	HA20-CMT-5(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-11	Date Collected:	04/06/21 10:45
Client ID:	HA20-CMT-5(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	95		70-130

SAMPLE RESULTS

Lab ID:	L2117259-12	Date Collected:	04/06/21 11:15
Client ID:	HA20-CMT-5(OW)-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 12:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.47	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	0.16	J	ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	0.24	J	ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-12 | Date Collected: 04/06/21 11:15
Client ID: HA20-CMT-5(OW)-04062021 DUP | Date Received: 04/06/21
Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-12	Date Collected:	04/06/21 11:15
Client ID:	HA20-CMT-5(OW)-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	98		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-13
Client ID: MW-BS31-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 12:42
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-13	Date Collected:	04/06/21 10:50
Client ID:	MW-BS31-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.6		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	0.34	J	ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	0.34	J	ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.63	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.63	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-13	Date Collected:	04/06/21 10:50
Client ID:	MW-BS31-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	96		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-14	Date Collected:	04/06/21 11:35
Client ID:	MW-S17-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 09:43
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.34	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	6.9		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-14
Client ID: MW-S17-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 11:35
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.82	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-14 Date Collected: 04/06/21 11:35

Client ID: MW-S17-04062021 Date Received: 04/06/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	97		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-15	Date Collected:	04/06/21 09:45
Client ID:	MW-BS22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 09:43
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-15	Date Collected:	04/06/21 09:45
Client ID:	MW-BS22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-15	Date Collected:	04/06/21 09:45
Client ID:	MW-BS22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	127		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-16
Client ID: MW-S22-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 12:10
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 11:46
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-16 Date Collected: 04/06/21 12:10
Client ID: MW-S22-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-16	Date Collected:	04/06/21 12:10
Client ID:	MW-S22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	127		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-17	Date Collected:	04/06/21 12:45
Client ID:	MW-S28-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 11:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-17 Date Collected: 04/06/21 12:45
Client ID: MW-S28-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-17	Date Collected:	04/06/21 12:45
Client ID:	MW-S28-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	95		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-18
Client ID: MW-BS50-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:05
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 12:27
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	7.3		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.35	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-18
Date Collected: 04/06/21 13:05
Client ID: MW-BS50-04062021
Date Received: 04/06/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.24	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.68	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.68	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-18	Date Collected:	04/06/21 13:05
Client ID:	MW-BS50-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	127		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	128		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-19
Client ID: HB-620-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 13:08
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.40	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-19 Date Collected: 04/06/21 13:50
Client ID: HB-620-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-19	Date Collected:	04/06/21 13:50
Client ID:	HB-620-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	129		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	128		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-20
Client ID: HB-12-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 14:10
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 13:50
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.30	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	0.36	J	ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-20 Date Collected: 04/06/21 14:10
Client ID: HB-12-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-20	Date Collected:	04/06/21 14:10
Client ID:	HB-12-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	124		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-22
Client ID: MW-S39-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:10
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 14:31
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-22 Date Collected: 04/06/21 13:10
Client ID: MW-S39-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-22 Date Collected: 04/06/21 13:10
Client ID: MW-S39-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	129		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	121		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-23	Date Collected:	04/06/21 13:15
Client ID:	MW-S39-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 15:12
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-23 Date Collected: 04/06/21 13:15
Client ID: MW-S39-04062021 DUP Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-23	Date Collected:	04/06/21 13:15
Client ID:	MW-S39-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	126		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	126		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-24
Client ID: MW-SD39-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:00
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 15:53
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.38	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-24 Date Collected: 04/06/21 15:00
Client ID: MW-SD39-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	0.69	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-24
Client ID: MW-SD39-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 15:00
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	129		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	130		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-25
Client ID: MW-SD17-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:25
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 05:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.45	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	5.0		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-25
Client ID: MW-SD17-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 15:25
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.79	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-25	Date Collected:	04/06/21 15:25
Client ID:	MW-SD17-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	94		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-26
Client ID: MW-SD61-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 14:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 06:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-26
Client ID: MW-SD61-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 14:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-26	Date Collected:	04/06/21 14:45
Client ID:	MW-SD61-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	96		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-27	Date Collected:	04/06/21 15:30
Client ID:	MW-S12-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/16/21 17:57
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.38	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-27 Date Collected: 04/06/21 15:30
Client ID: MW-S12-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-27	Date Collected:	04/06/21 15:30
Client ID:	MW-S12-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**139**	Q	70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	**141**	Q	70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-29	Date Collected:	04/06/21 16:05
Client ID:	OW-2-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Matrix:	Water
Analytical Method:	97,8260C
Analytical Date:	04/17/21 13:12
Analyst:	MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.36	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-29	Date Collected:	04/06/21 16:05
Client ID:	OW-2-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-29 Date Collected: 04/06/21 16:05
Client ID: OW-2-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	94		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-30	Date Collected:	04/06/21 16:40
Client ID:	MW-S24-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 13:42
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.46	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-30 Date Collected: 04/06/21 16:40

Client ID: MW-S24-04062021 Date Received: 04/06/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.36	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259

Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-30
Client ID: MW-S24-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 16:40
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	98		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/16/21 05:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-05,07-10,14 Batch: WG1486971-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/16/21 05:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-05,07-10,14 Batch: WG1486971-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/16/21 05:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-05,07-10,14 Batch: WG1486971-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	95		70-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/16/21 09:02
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 15-16,18-20,22-24,27 Batch: WG1487356-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/16/21 09:02
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 15-16,18-20,22-24,27 Batch: WG1487356-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/16/21 09:02
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 15-16,18-20,22-24,27 Batch: WG1487356-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	117		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:10
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 06,11-13,17,29-30 Batch: WG1487616-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:10
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 06,11-13,17,29-30 Batch: WG1487616-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:10
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 06,11-13,17,29-30 Batch: WG1487616-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	95		70-130

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 25-26 Batch: WG1487775-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 25-26 Batch: WG1487775-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 25-26 Batch: WG1487775-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	95		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05,07-10,14 Batch: WG1486971-3 WG1486971-4								
Methylene chloride	95		93		70-130	2		20
1,1-Dichloroethane	95		92		70-130	3		20
Chloroform	94		92		70-130	2		20
Carbon tetrachloride	92		91		70-130	1		20
1,2-Dichloropropane	98		94		70-130	4		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	97		96		70-130	1		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	90		89		70-130	1		20
1,2-Dichloroethane	100		98		70-130	2		20
1,1,1-Trichloroethane	92		90		70-130	2		20
Bromodichloromethane	96		94		70-130	2		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	93		91		70-130	2		20
Bromoform	110		110		70-130	0		20
1,1,2,2-Tetrachloroethane	110		110		70-130	0		20
Benzene	95		93		70-130	2		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	93		92		70-130	1		20
Bromomethane	81		84		70-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05,07-10,14 Batch: WG1486971-3 WG1486971-4								
Vinyl chloride	93		93		70-130	0		20
Chloroethane	91		92		70-130	1		20
1,1-Dichloroethene	85		82		70-130	4		20
trans-1,2-Dichloroethene	91		88		70-130	3		20
Trichloroethene	89		87		70-130	2		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	100		110		70-130	10		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	98		96		70-130	2		20
p/m-Xylene	95		95		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	94		90		70-130	4		20
Dibromomethane	98		96		70-130	2		20
1,2,3-Trichloropropane	120		120		70-130	0		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	88		86		70-130	2		20
Acetone	100		100		70-130	0		20
Carbon disulfide	83		82		70-130	1		20
Methyl ethyl ketone	110		100		70-130	10		20
Methyl isobutyl ketone	99		100		70-130	1		20
2-Hexanone	100		100		70-130	0		20
Bromochloromethane	95		92		70-130	3		20
Tetrahydrofuran	100		99		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05,07-10,14 Batch: WG1486971-3 WG1486971-4								
2,2-Dichloropropane	100		97		70-130	3		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	110		100		70-130	10		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	96		96		70-130	0		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	100		110		70-130	10		20
Hexachlorobutadiene	96		95		70-130	1		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	92		90		70-130	2		20
Naphthalene	110		120		70-130	9		20
n-Propylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	100		100		70-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Diethyl ether	92		90		70-130	2		20
Diisopropyl Ether	100		100		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		99		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05,07-10,14 Batch: WG1486971-3 WG1486971-4								
Tertiary-Amyl Methyl Ether	98		96		70-130	2		20
1,4-Dioxane	104		96		70-130	8		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		103		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	107		107		70-130
Dibromofluoromethane	96		95		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 15-16,18-20,22-24,27 Batch: WG1487356-3 WG1487356-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	100		100		70-130	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	110		100		70-130	10		20
Trichlorofluoromethane	99		100		70-130	1		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	100		100		70-130	0		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	110		100		70-130	10		20
1,1-Dichloropropene	110		100		70-130	10		20
Bromoform	92		87		70-130	6		20
1,1,2,2-Tetrachloroethane	100		100		70-130	0		20
Benzene	110		100		70-130	10		20
Toluene	110		110		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	100		94		70-130	6		20
Bromomethane	95		85		70-130	11		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 15-16,18-20,22-24,27 Batch: WG1487356-3 WG1487356-4								
Vinyl chloride	97		96		70-130	1		20
Chloroethane	110		110		70-130	0		20
1,1-Dichloroethene	100		100		70-130	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		99		70-130	1		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		99		70-130	1		20
Methyl tert butyl ether	98		96		70-130	2		20
p/m-Xylene	105		110		70-130	5		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	110		100		70-130	10		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	100		100		70-130	0		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	**60**	Q	**64**	Q	70-130	6		20
Acetone	130		120		70-130	8		20
Carbon disulfide	100		100		70-130	0		20
Methyl ethyl ketone	110		110		70-130	0		20
Methyl isobutyl ketone	92		100		70-130	8		20
2-Hexanone	100		110		70-130	10		20
Bromochloromethane	110		100		70-130	10		20
Tetrahydrofuran	120		120		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 15-16,18-20,22-24,27 Batch: WG1487356-3 WG1487356-4								
2,2-Dichloropropane	110		110		70-130	0		20
1,2-Dibromoethane	110		100		70-130	10		20
1,3-Dichloropropane	110		100		70-130	10		20
1,1,1,2-Tetrachloroethane	110		100		70-130	10		20
Bromobenzene	95		93		70-130	2		20
n-Butylbenzene	110		100		70-130	10		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	110		100		70-130	10		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	92		92		70-130	0		20
Hexachlorobutadiene	110		100		70-130	10		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	96		89		70-130	8		20
n-Propylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	100		93		70-130	7		20
1,2,4-Trichlorobenzene	100		93		70-130	7		20
1,3,5-Trimethylbenzene	100		100		70-130	0		20
1,2,4-Trimethylbenzene	100		99		70-130	1		20
Diethyl ether	100		100		70-130	0		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 15-16,18-20,22-24,27 Batch: WG1487356-3 WG1487356-4								
Tertiary-Amyl Methyl Ether	94		94		70-130	0		20
1,4-Dioxane	118		104		70-130	13		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		99		70-130
Toluene-d8	102		104		70-130
4-Bromofluorobenzene	100		98		70-130
Dibromofluoromethane	100		100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06,11-13,17,29-30 Batch: WG1487616-3 WG1487616-4								
Methylene chloride	92		88		70-130	4		20
1,1-Dichloroethane	90		90		70-130	0		20
Chloroform	89		88		70-130	1		20
Carbon tetrachloride	89		87		70-130	2		20
1,2-Dichloropropane	93		90		70-130	3		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	120		110		70-130	9		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	110		110		70-130	0		20
Trichlorofluoromethane	84		86		70-130	2		20
1,2-Dichloroethane	97		94		70-130	3		20
1,1,1-Trichloroethane	87		86		70-130	1		20
Bromodichloromethane	92		89		70-130	3		20
trans-1,3-Dichloropropene	120		110		70-130	9		20
cis-1,3-Dichloropropene	95		92		70-130	3		20
1,1-Dichloropropene	87		86		70-130	1		20
Bromoform	130		120		70-130	8		20
1,1,2,2-Tetrachloroethane	130		120		70-130	8		20
Benzene	90		88		70-130	2		20
Toluene	110		110		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	86		85		70-130	1		20
Bromomethane	82		82		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06,11-13,17,29-30 Batch: WG1487616-3 WG1487616-4								
Vinyl chloride	86		86		70-130	0		20
Chloroethane	86		88		70-130	2		20
1,1-Dichloroethene	79		83		70-130	5		20
trans-1,2-Dichloroethene	85		83		70-130	2		20
Trichloroethene	85		82		70-130	4		20
1,2-Dichlorobenzene	120		120		70-130	0		20
1,3-Dichlorobenzene	120		110		70-130	9		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	96		90		70-130	6		20
p/m-Xylene	100		95		70-130	5		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	90		88		70-130	2		20
Dibromomethane	94		89		70-130	5		20
1,2,3-Trichloropropane	**140**	Q	130		70-130	7		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	74		74		70-130	0		20
Acetone	100		96		70-130	4		20
Carbon disulfide	80		83		70-130	4		20
Methyl ethyl ketone	100		98		70-130	2		20
Methyl isobutyl ketone	110		100		70-130	10		20
2-Hexanone	110		110		70-130	0		20
Bromochloromethane	89		84		70-130	6		20
Tetrahydrofuran	100		95		70-130	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06,11-13,17,29-30 Batch: WG1487616-3 WG1487616-4								
2,2-Dichloropropane	95		94		70-130	1		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	120		110		70-130	9		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	120		120		70-130	0		20
n-Butylbenzene	100		100		70-130	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	120		120		70-130	0		20
p-Chlorotoluene	120		120		70-130	0		20
1,2-Dibromo-3-chloropropane	120		110		70-130	9		20
Hexachlorobutadiene	100		100		70-130	0		20
Isopropylbenzene	120		120		70-130	0		20
p-Isopropyltoluene	97		97		70-130	0		20
Naphthalene	130		120		70-130	8		20
n-Propylbenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	130		120		70-130	8		20
1,2,4-Trichlorobenzene	120		110		70-130	9		20
1,3,5-Trimethylbenzene	110		110		70-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
Diethyl ether	91		90		70-130	1		20
Diisopropyl Ether	98		95		70-130	3		20
Ethyl-Tert-Butyl-Ether	96		92		70-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06,11-13,17,29-30 Batch: WG1487616-3 WG1487616-4								
Tertiary-Amyl Methyl Ether	96		92		70-130	4		20
1,4-Dioxane	122		102		70-130	18		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	103		101		70-130
Toluene-d8	109		111		70-130
4-Bromofluorobenzene	108		109		70-130
Dibromofluoromethane	93		94		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 25-26 Batch: WG1487775-3 WG1487775-4								
Methylene chloride	84		82		70-130	2		20
1,1-Dichloroethane	84		84		70-130	0		20
Chloroform	83		83		70-130	0		20
Carbon tetrachloride	82		81		70-130	1		20
1,2-Dichloropropane	86		87		70-130	1		20
Dibromochloromethane	110		100		70-130	10		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	93		92		70-130	1		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	81		79		70-130	3		20
1,2-Dichloroethane	93		92		70-130	1		20
1,1,1-Trichloroethane	81		80		70-130	1		20
Bromodichloromethane	86		85		70-130	1		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	92		91		70-130	1		20
1,1-Dichloropropene	82		81		70-130	1		20
Bromoform	110		120		70-130	9		20
1,1,2,2-Tetrachloroethane	120		130		70-130	8		20
Benzene	83		82		70-130	1		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		100		70-130	10		20
Chloromethane	82		81		70-130	1		20
Bromomethane	**68**	Q	**69**	Q	70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 25-26 Batch: WG1487775-3 WG1487775-4								
Vinyl chloride	83		81		70-130	2		20
Chloroethane	84		81		70-130	4		20
1,1-Dichloroethene	72		76		70-130	5		20
trans-1,2-Dichloroethene	78		77		70-130	1		20
Trichloroethene	77		76		70-130	1		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	100		110		70-130	10		20
Methyl tert butyl ether	90		88		70-130	2		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	81		81		70-130	0		20
Dibromomethane	88		87		70-130	1		20
1,2,3-Trichloropropane	130		130		70-130	0		20
Styrene	100		95		70-130	5		20
Dichlorodifluoromethane	74		73		70-130	1		20
Acetone	96		93		70-130	3		20
Carbon disulfide	74		77		70-130	4		20
Methyl ethyl ketone	100		100		70-130	0		20
Methyl isobutyl ketone	100		110		70-130	10		20
2-Hexanone	110		110		70-130	0		20
Bromochloromethane	82		82		70-130	0		20
Tetrahydrofuran	97		98		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 25-26 Batch: WG1487775-3 WG1487775-4								
2,2-Dichloropropane	90		88		70-130	2		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	99		99		70-130	0		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	120		110		70-130	9		20
Hexachlorobutadiene	94		94		70-130	0		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	92		92		70-130	0		20
Naphthalene	120		120		70-130	0		20
n-Propylbenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	120		120		70-130	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,3,5-Trimethylbenzene	100		100		70-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
Diethyl ether	88		88		70-130	0		20
Diisopropyl Ether	93		93		70-130	0		20
Ethyl-Tert-Butyl-Ether	92		91		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 25-26 Batch: WG1487775-3 WG1487775-4								
Tertiary-Amyl Methyl Ether	90		90		70-130	0		20
1,4-Dioxane	88		88		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		104		70-130
Toluene-d8	112		110		70-130
4-Bromofluorobenzene	110		110		70-130
Dibromofluoromethane	93		93		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05,07-10,14 QC Batch ID: WG1486971-6 WG1486971-7 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
Methylene chloride	ND	10	8.6	86		8.8	88		70-130	2		20
1,1-Dichloroethane	ND	10	8.9	89		9.0	90		70-130	1		20
Chloroform	0.34J	10	9.1	91		9.2	92		70-130	1		20
Carbon tetrachloride	ND	10	9.0	90		9.0	90		70-130	0		20
1,2-Dichloropropane	ND	10	8.9	89		9.0	90		70-130	1		20
Dibromochloromethane	ND	10	10	100		11	110		70-130	10		20
1,1,2-Trichloroethane	ND	10	11	110		11	110		70-130	0		20
Tetrachloroethene	6.9	10	17	101		17	101		70-130	0		20
Chlorobenzene	ND	10	10	100		10	100		70-130	0		20
Trichlorofluoromethane	ND	10	9.0	90		9.2	92		70-130	2		20
1,2-Dichloroethane	ND	10	9.1	91		9.4	94		70-130	3		20
1,1,1-Trichloroethane	ND	10	8.8	88		8.9	89		70-130	1		20
Bromodichloromethane	ND	10	8.7	87		9.1	91		70-130	4		20
trans-1,3-Dichloropropene	ND	10	11	110		11	110		70-130	0		20
cis-1,3-Dichloropropene	ND	10	8.7	87		9.1	91		70-130	4		20
1,1-Dichloropropene	ND	10	8.9	89		9.0	90		70-130	1		20
Bromoform	ND	10	11	110		11	110		70-130	0		20
1,1,2,2-Tetrachloroethane	ND	10	12	120		12	120		70-130	0		20
Benzene	ND	10	8.8	88		8.8	88		70-130	0		20
Toluene	ND	10	10	100		11	110		70-130	10		20
Ethylbenzene	ND	10	11	110		11	110		70-130	0		20
Chloromethane	ND	10	8.7	87		8.9	89		70-130	2		20
Bromomethane	ND	10	8.3	83		8.2	82		70-130	1		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05,07-10,14 QC Batch ID: WG1486971-6 WG1486971-7 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
Vinyl chloride	ND	10	8.9	89		9.3	93		70-130	4		20
Chloroethane	ND	10	8.9	89		9.0	90		70-130	1		20
1,1-Dichloroethene	ND	10	8.6	86		8.2	82		70-130	5		20
trans-1,2-Dichloroethene	ND	10	8.4	84		8.5	85		70-130	1		20
Trichloroethene	0.82J	10	8.9	89		9.0	90		70-130	1		20
1,2-Dichlorobenzene	ND	10	11	110		11	110		70-130	0		20
1,3-Dichlorobenzene	ND	10	11	110		11	110		70-130	0		20
1,4-Dichlorobenzene	ND	10	10	100		11	110		70-130	10		20
Methyl tert butyl ether	ND	10	8.5	85		9.0	90		70-130	6		20
p/m-Xylene	ND	20	19	95		19	95		70-130	0		20
o-Xylene	ND	20	20	100		20	100		70-130	0		20
cis-1,2-Dichloroethene	ND	10	8.6	86		8.6	86		70-130	0		20
Dibromomethane	ND	10	8.5	85		8.9	89		70-130	5		20
1,2,3-Trichloropropane	ND	10	12	120		13	130		70-130	8		20
Styrene	ND	20	20	100		20	100		70-130	0		20
Dichlorodifluoromethane	ND	10	8.4	84		8.7	87		70-130	4		20
Acetone	ND	10	8.7	87		8.9	89		70-130	2		20
Carbon disulfide	ND	10	8.6	86		7.9	79		70-130	8		20
Methyl ethyl ketone	ND	10	9.2	92		9.7	97		70-130	5		20
Methyl isobutyl ketone	ND	10	9.6	96		10	100		70-130	4		20
2-Hexanone	ND	10	9.6	96		10	100		70-130	4		20
Bromochloromethane	ND	10	8.4	84		8.7	87		70-130	4		20
Tetrahydrofuran	ND	10	8.7	87		9.5	95		70-130	9		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05,07-10,14 QC Batch ID: WG1486971-6 WG1486971-7 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
2,2-Dichloropropane	ND	10	9.3	93		9.3	93		70-130	0		20
1,2-Dibromoethane	ND	10	10	100		10	100		70-130	0		20
1,3-Dichloropropane	ND	10	11	110		11	110		70-130	0		20
1,1,1,2-Tetrachloroethane	ND	10	10	100		11	110		70-130	10		20
Bromobenzene	ND	10	11	110		11	110		70-130	0		20
n-Butylbenzene	ND	10	10	100		10	100		70-130	0		20
sec-Butylbenzene	ND	10	11	110		11	110		70-130	0		20
tert-Butylbenzene	ND	10	11	110		11	110		70-130	0		20
o-Chlorotoluene	ND	10	11	110		11	110		70-130	0		20
p-Chlorotoluene	ND	10	11	110		11	110		70-130	0		20
1,2-Dibromo-3-chloropropane	ND	10	10	100		11	110		70-130	10		20
Hexachlorobutadiene	ND	10	9.6	96		9.6	96		70-130	0		20
Isopropylbenzene	ND	10	12	120		11	110		70-130	9		20
p-Isopropyltoluene	ND	10	9.4	94		9.4	94		70-130	0		20
Naphthalene	ND	10	11	110		12	120		70-130	9		20
n-Propylbenzene	ND	10	11	110		11	110		70-130	0		20
1,2,3-Trichlorobenzene	ND	10	11	110		12	120		70-130	9		20
1,2,4-Trichlorobenzene	ND	10	10	100		11	110		70-130	10		20
1,3,5-Trimethylbenzene	ND	10	10	100		11	110		70-130	10		20
1,2,4-Trimethylbenzene	ND	10	11	110		11	110		70-130	0		20
Diethyl ether	ND	10	8.4	84		8.8	88		70-130	5		20
Diisopropyl Ether	ND	10	9.1	91		9.5	95		70-130	4		20
Ethyl-Tert-Butyl-Ether	ND	10	8.9	89		9.3	93		70-130	4		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05,07-10,14 QC Batch ID: WG1486971-6 WG1486971-7 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
Tertiary-Amyl Methyl Ether	ND	10	8.5	85		9.0	90		70-130	6		20
1,4-Dioxane	ND	500	380	76		440	88		70-130	15		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		101		70-130
4-Bromofluorobenzene	108		107		70-130
Dibromofluoromethane	94		94		70-130
Toluene-d8	110		107		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06,11-13,17,29-30 QC Batch ID: WG1487616-6 WG1487616-7 QC Sample: L2117259-17 Client ID: MW-S28-04062021												
Methylene chloride	ND	10	8.8	88		9.5	95		70-130	8		20
1,1-Dichloroethane	ND	10	9.1	91		9.9	99		70-130	8		20
Chloroform	ND	10	8.8	88		9.6	96		70-130	9		20
Carbon tetrachloride	ND	10	9.1	91		9.9	99		70-130	8		20
1,2-Dichloropropane	ND	10	9.0	90		9.9	99		70-130	10		20
Dibromochloromethane	ND	10	10	100		11	110		70-130	10		20
1,1,2-Trichloroethane	ND	10	11	110		12	120		70-130	9		20
Tetrachloroethene	ND	10	10	100		11	110		70-130	10		20
Chlorobenzene	ND	10	10	100		11	110		70-130	10		20
Trichlorofluoromethane	ND	10	9.1	91		10	100		70-130	9		20
1,2-Dichloroethane	ND	10	9.4	94		10	100		70-130	6		20
1,1,1-Trichloroethane	ND	10	9.0	90		9.6	96		70-130	6		20
Bromodichloromethane	ND	10	9.0	90		9.6	96		70-130	6		20
trans-1,3-Dichloropropene	ND	10	11	110		12	120		70-130	9		20
cis-1,3-Dichloropropene	ND	10	8.9	89		9.7	97		70-130	9		20
1,1-Dichloropropene	ND	10	9.0	90		9.9	99		70-130	10		20
Bromoform	ND	10	11	110		12	120		70-130	9		20
1,1,2,2-Tetrachloroethane	ND	10	12	120		13	130		70-130	8		20
Benzene	ND	10	8.9	89		9.7	97		70-130	9		20
Toluene	ND	10	11	110		12	120		70-130	9		20
Ethylbenzene	ND	10	11	110		12	120		70-130	9		20
Chloromethane	ND	10	8.9	89		9.9	99		70-130	11		20
Bromomethane	ND	10	6.3	**63**	Q	7.8	78		70-130	**21**	Q	20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

MCP Volatile Organics - Westborough Lab Associated sample(s): 06,11-13,17,29-30 QC Batch ID: WG1487616-6 WG1487616-7 QC Sample: L2117259-17
Client ID: MW-S28-04062021

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Vinyl chloride	ND	10	9.1	91		10	100		70-130	9		20
Chloroethane	ND	10	9.0	90		10	100		70-130	11		20
1,1-Dichloroethene	ND	10	8.6	86		9.4	94		70-130	9		20
trans-1,2-Dichloroethene	ND	10	8.5	85		9.3	93		70-130	9		20
Trichloroethene	ND	10	8.4	84		9.0	90		70-130	7		20
1,2-Dichlorobenzene	ND	10	11	110		12	120		70-130	9		20
1,3-Dichlorobenzene	ND	10	11	110		12	120		70-130	9		20
1,4-Dichlorobenzene	ND	10	11	110		12	120		70-130	9		20
Methyl tert butyl ether	ND	10	8.8	88		9.6	96		70-130	9		20
p/m-Xylene	ND	20	20	100		21	105		70-130	5		20
o-Xylene	ND	20	20	100		21	105		70-130	5		20
cis-1,2-Dichloroethene	ND	10	8.4	84		9.4	94		70-130	11		20
Dibromomethane	ND	10	8.8	88		9.6	96		70-130	9		20
1,2,3-Trichloropropane	ND	10	13	130		14	**140**	Q	70-130	7		20
Styrene	ND	20	20	100		22	110		70-130	10		20
Dichlorodifluoromethane	ND	10	8.4	84		9.3	93		70-130	10		20
Acetone	ND	10	9.6	96		10	100		70-130	4		20
Carbon disulfide	ND	10	8.8	88		9.6	96		70-130	9		20
Methyl ethyl ketone	ND	10	9.6	96		10	100		70-130	4		20
Methyl isobutyl ketone	ND	10	9.9	99		11	110		70-130	11		20
2-Hexanone	ND	10	10	100		11	110		70-130	10		20
Bromochloromethane	ND	10	8.6	86		9.1	91		70-130	6		20
Tetrahydrofuran	ND	10	9.2	92		9.9	99		70-130	7		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06,11-13,17,29-30 QC Batch ID: WG1487616-6 WG1487616-7 QC Sample: L2117259-17 Client ID: MW-S28-04062021												
2,2-Dichloropropane	ND	10	8.8	88		9.4	94		70-130	7		20
1,2-Dibromoethane	ND	10	10	100		11	110		70-130	10		20
1,3-Dichloropropane	ND	10	11	110		12	120		70-130	9		20
1,1,1,2-Tetrachloroethane	ND	10	11	110		12	120		70-130	9		20
Bromobenzene	ND	10	11	110		12	120		70-130	9		20
n-Butylbenzene	ND	10	10	100		11	110		70-130	10		20
sec-Butylbenzene	ND	10	11	110		12	120		70-130	9		20
tert-Butylbenzene	ND	10	11	110		12	120		70-130	9		20
o-Chlorotoluene	ND	10	11	110		12	120		70-130	9		20
p-Chlorotoluene	ND	10	11	110		12	120		70-130	9		20
1,2-Dibromo-3-chloropropane	ND	10	11	110		12	120		70-130	9		20
Hexachlorobutadiene	ND	10	9.7	97		11	110		70-130	13		20
Isopropylbenzene	ND	10	12	120		13	130		70-130	8		20
p-Isopropyltoluene	ND	10	9.5	95		10	100		70-130	5		20
Naphthalene	ND	10	11	110		12	120		70-130	9		20
n-Propylbenzene	ND	10	11	110		12	120		70-130	9		20
1,2,3-Trichlorobenzene	ND	10	11	110		13	130		70-130	17		20
1,2,4-Trichlorobenzene	ND	10	10	100		12	120		70-130	18		20
1,3,5-Trimethylbenzene	ND	10	11	110		12	120		70-130	9		20
1,2,4-Trimethylbenzene	ND	10	11	110		12	120		70-130	9		20
Diethyl ether	ND	10	8.8	88		9.6	96		70-130	9		20
Diisopropyl Ether	ND	10	9.4	94		10	100		70-130	6		20
Ethyl-Tert-Butyl-Ether	ND	10	9.1	91		10	100		70-130	9		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06,11-13,17,29-30 QC Batch ID: WG1487616-6 WG1487616-7 QC Sample: L2117259-17 Client ID: MW-S28-04062021												
Tertiary-Amyl Methyl Ether	ND	10	8.8	88		9.6	96		70-130	9		20
1,4-Dioxane	ND	500	450	90		470	94		70-130	4		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		103		70-130
4-Bromofluorobenzene	108		109		70-130
Dibromofluoromethane	96		95		70-130
Toluene-d8	110		111		70-130

SEMIVOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-01
Client ID: HA20-CMT3T(OW)-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 16:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 04:04
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-01 Date Collected: 04/05/21 16:45

Client ID: HA20-CMT3T(OW)-04052021 Date Received: 04/06/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	29		15-110
Phenol-d6	23		15-110
Nitrobenzene-d5	51		30-130
2-Fluorobiphenyl	43		30-130
2,4,6-Tribromophenol	34		15-110
4-Terphenyl-d14	50		30-130

Project Name: NUCLEAR METALS

Lab Number: L2117259

Project Number: 3252H

Report Date: 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-01	Date Collected:	04/05/21 16:45
Client ID:	HA20-CMT3T(OW)-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 12:58		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	43.7		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-01
Client ID: HA20-CMT3T(OW)-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 16:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/14/21 20:58
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-01 Date Collected: 04/05/21 16:45
Client ID: HA20-CMT3T(OW)-04052021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	26		15-110
Phenol-d6	24		15-110
Nitrobenzene-d5	47		30-130
2-Fluorobiphenyl	47		30-130
2,4,6-Tribromophenol	30		15-110
4-Terphenyl-d14	54		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-02
Client ID: GZW-9-2-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 16:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 04:26
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-02
Client ID: GZW-9-2-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 16:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	56		30-130
2,4,6-Tribromophenol	60		15-110
4-Terphenyl-d14	58		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-02	Date Collected:	04/05/21 16:50
Client ID:	GZW-9-2-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 13:25		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-02	Date Collected:	04/05/21 16:50
Client ID:	GZW-9-2-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 07:54
Analytical Date:	04/14/21 21:16		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-02	Date Collected:	04/05/21 16:50
Client ID:	GZW-9-2-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	59		15-110
4-Terphenyl-d14	72		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-03	Date Collected:	04/05/21 17:00
Client ID:	MW-S15-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/11/21 01:20		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	4.42		ng/l	1.78	0.363	1
Perfluoropentanoic Acid (PFPeA)	8.24		ng/l	1.78	0.352	1
Perfluorobutanesulfonic Acid (PFBS)	2.72		ng/l	1.78	0.212	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.78	0.402	1
Perfluorohexanoic Acid (PFHxA)	6.46		ng/l	1.78	0.292	1
Perfluoropentanesulfonic Acid (PFPeS)	0.416	J	ng/l	1.78	0.218	1
Perfluoroheptanoic Acid (PFHpA)	3.21		ng/l	1.78	0.200	1
Perfluorohexanesulfonic Acid (PFHxS)	1.79		ng/l	1.78	0.335	1
Perfluorooctanoic Acid (PFOA)	6.67		ng/l	1.78	0.210	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.78	1.18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.78	0.612	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.78	0.278	1
Perfluorooctanesulfonic Acid (PFOS)	1.50	J	ng/l	1.78	0.448	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.78	0.270	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.78	1.08	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.78	0.997	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.78	0.577	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.78	0.231	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.78	0.872	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.78	0.716	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.78	0.331	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.78	0.291	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.78	0.221	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.5	20.2	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.78	0.299	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.56	1.10	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.56	1.02	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-03	Date Collected:	04/05/21 17:00
Client ID:	MW-S15-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.78	0.548	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.45	1.80	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.78	0.246	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.78	0.261	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	97		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	67		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	92		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	111		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	71		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	83		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	116		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	89		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**181**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	73		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**181**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	70		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	86		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	78		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	100		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	90		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	85		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	56		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-03	Date Collected:	04/05/21 17:00
Client ID:	MW-S15-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/17/21 21:06		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.78	0.516	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.8	6.55	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.8	5.91	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.5	19.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.5	20.0	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	72		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	31		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	24		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	46		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	41		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-03	Date Collected:	04/05/21 17:00
Client ID:	MW-S15-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/09/21 07:51
Analytical Date:	04/11/21 04:49		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-03	Date Collected:	04/05/21 17:00
Client ID:	MW-S15-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	53		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	62		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-03	Date Collected:	04/05/21 17:00
Client ID:	MW-S15-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 13:53		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-03
Client ID: MW-S15-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 17:00
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 10:51
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-03	Date Collected:	04/05/21 17:00
Client ID:	MW-S15-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-110
Phenol-d6	35		15-110
Nitrobenzene-d5	50		30-130
2-Fluorobiphenyl	60		30-130
2,4,6-Tribromophenol	93		15-110
4-Terphenyl-d14	69		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-04
Client ID: MW-S60-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 17:25
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 05:12
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-04	Date Collected:	04/05/21 17:25
Client ID:	MW-S60-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	58		30-130
2,4,6-Tribromophenol	68		15-110
4-Terphenyl-d14	63		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-04	Date Collected:	04/05/21 17:25
Client ID:	MW-S60-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 14:20		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-04	Date Collected:	04/05/21 17:25
Client ID:	MW-S60-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 07:54
Analytical Date:	04/14/21 21:54		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-04	Date Collected:	04/05/21 17:25
Client ID:	MW-S60-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	34		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	57		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	43		15-110
4-Terphenyl-d14	72		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259

Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-05	Date Collected:	04/06/21 09:00
Client ID:	EQ BLANK1-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/09/21 08:40
Analytical Date:	04/11/21 05:35		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-05	Date Collected:	04/06/21 09:00
Client ID:	EQ BLANK1-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	29		15-110
Phenol-d6	24		15-110
Nitrobenzene-d5	39		30-130
2-Fluorobiphenyl	37		30-130
2,4,6-Tribromophenol	49		15-110
4-Terphenyl-d14	49		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259

Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-05	Date Collected:	04/06/21 09:00
Client ID:	EQ BLANK1-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 14:48		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-05
Client ID: EQ BLANK1-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 09:00
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/14/21 22:12
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 08:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-05	Date Collected:	04/06/21 09:00
Client ID:	EQ BLANK1-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	29		15-110
Phenol-d6	25		15-110
Nitrobenzene-d5	37		30-130
2-Fluorobiphenyl	39		30-130
2,4,6-Tribromophenol	46		15-110
4-Terphenyl-d14	54		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-07
Client ID: MW-S29-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 09:45
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 05:58
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 08:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-07 Date Collected: 04/06/21 09:45

Client ID: MW-S29-04062021 Date Received: 04/06/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-110
Phenol-d6	34		15-110
Nitrobenzene-d5	55		30-130
2-Fluorobiphenyl	51		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	55		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-07	Date Collected:	04/06/21 09:45
Client ID:	MW-S29-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 15:15		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.121	J	ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-07	Date Collected:	04/06/21 09:45
Client ID:	MW-S29-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 08:42
Analytical Date:	04/14/21 22:31		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-07	Date Collected:	04/06/21 09:45
Client ID:	MW-S29-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		15-110
Phenol-d6	34		15-110
Nitrobenzene-d5	52		30-130
2-Fluorobiphenyl	53		30-130
2,4,6-Tribromophenol	45		15-110
4-Terphenyl-d14	60		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-08	Date Collected:	04/06/21 10:25
Client ID:	HA20-CMT-6(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/12/21 08:00
Analytical Date:	04/13/21 05:17		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	2.0		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-08	Date Collected:	04/06/21 10:25
Client ID:	HA20-CMT-6(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	68		15-110
4-Terphenyl-d14	78		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-08	Date Collected:	04/06/21 10:25
Client ID:	HA20-CMT-6(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 15:43		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.226		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-08
Client ID: HA20-CMT-6(OW)-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:25
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 18:26
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.10		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.09	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.07	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.11		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.05	J	ug/l	0.10	0.01	1
Chrysene	0.08	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.07	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.08	J	ug/l	0.10	0.01	1
Pyrene	0.10	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-08	Date Collected:	04/06/21 10:25
Client ID:	HA20-CMT-6(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	86		30-130
2,4,6-Tribromophenol	51		15-110
4-Terphenyl-d14	94		30-130

Project Name: NUCLEAR METALS

Lab Number: L2117259

Project Number: 3252H

Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-09
Client ID: MW-8A-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:40
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/13/21 05:40
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-09	Date Collected:	04/06/21 10:40
Client ID:	MW-8A-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	71		30-130
2,4,6-Tribromophenol	67		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS

Lab Number: L2117259

Project Number: 3252H

Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-09

Client ID: MW-8A-04062021

Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:40

Date Received: 04/06/21

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Analytical Method: 97,8270D-SIM

Analytical Date: 04/13/21 16:09

Analyst: PS

Extraction Method: EPA 3510C

Extraction Date: 04/09/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-09	Date Collected:	04/06/21 10:40
Client ID:	MW-8A-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 08:00
Analytical Date:	04/15/21 18:45		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.09	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.21		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.04	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.04	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.09	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Chrysene	0.06	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.05	J	ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.06	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.05	J	ug/l	0.10	0.01	1
Pyrene	0.08	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.10		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-09	Date Collected:	04/06/21 10:40
Client ID:	MW-8A-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	90		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-10
Client ID: MW-BS36-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:40
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 04:57
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-10	Date Collected:	04/06/21 10:40
Client ID:	MW-BS36-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	65		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-10
Client ID: MW-BS36-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 10:40
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/13/21 16:33
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/09/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.133	J	ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-10
Client ID: MW-BS36-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:40
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/14/21 23:08
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-10	Date Collected:	04/06/21 10:40
Client ID:	MW-BS36-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	88		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-11	Date Collected:	04/06/21 10:45
Client ID:	HA20-CMT-5(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/12/21 08:00
Analytical Date:	04/13/21 06:03		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-11	Date Collected:	04/06/21 10:45
Client ID:	HA20-CMT-5(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-110
Phenol-d6	37		15-110
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	54		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	71		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-11
Client ID: HA20-CMT-5(OW)-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 10:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/13/21 16:59
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/09/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.221		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-11
Client ID: HA20-CMT-5(OW)-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 10:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 19:04
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.08	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	0.02	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.06	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-11	Date Collected:	04/06/21 10:45
Client ID:	HA20-CMT-5(OW)-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		15-110
Phenol-d6	34		15-110
Nitrobenzene-d5	56		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	50		15-110
4-Terphenyl-d14	88		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-12
Client ID: HA20-CMT-5(OW)-04062021 DUP
Sample Location: CONCORD, MA
Date Collected: 04/06/21 11:15
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/13/21 06:26
Analyst: JG
Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-12	Date Collected:	04/06/21 11:15
Client ID:	HA20-CMT-5(OW)-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	67		15-110
4-Terphenyl-d14	75		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-12
Client ID: HA20-CMT-5(OW)-04062021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/06/21 11:15
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/13/21 17:26
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.236		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-12	Date Collected:	04/06/21 11:15
Client ID:	HA20-CMT-5(OW)-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 08:00
Analytical Date:	04/15/21 19:22		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-12	Date Collected:	04/06/21 11:15
Client ID:	HA20-CMT-5(OW)-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	69		15-110
4-Terphenyl-d14	94		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-13	Date Collected:	04/06/21 10:50
Client ID:	MW-BS31-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/12/21 08:00
Analytical Date:	04/13/21 06:49		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-13	Date Collected:	04/06/21 10:50
Client ID:	MW-BS31-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	80		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-13	Date Collected:	04/06/21 10:50
Client ID:	MW-BS31-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 13:00
Analytical Date:	04/13/21 17:52		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	4.55		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2117259

Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-13
Client ID: MW-BS31-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 19:41
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.05	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.09	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.10	J	ug/l	0.10	0.01	1
Chrysene	0.10		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.08	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.10		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.10	J	ug/l	0.10	0.01	1
Pyrene	0.03	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-13	Date Collected:	04/06/21 10:50
Client ID:	MW-BS31-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	90		30-130
2,4,6-Tribromophenol	59		15-110
4-Terphenyl-d14	96		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-14
Client ID: MW-S17-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 11:35
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/13/21 07:57
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-14	Date Collected:	04/06/21 11:35
Client ID:	MW-S17-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	73		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	58		15-110
4-Terphenyl-d14	78		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-14	Date Collected:	04/06/21 11:35
Client ID:	MW-S17-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 08:00
Analytical Date:	04/15/21 17:12		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-14	Date Collected:	04/06/21 11:35
Client ID:	MW-S17-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-110
Phenol-d6	46		15-110
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-14	Date Collected:	04/06/21 11:35
Client ID:	MW-S17-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/19/21 11:13		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.308		ug/l	0.163	0.0815	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-15
Client ID: MW-BS22-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 09:45
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/11/21 06:21
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 08:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-15	Date Collected:	04/06/21 09:45
Client ID:	MW-BS22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	66		30-130
2-Fluorobiphenyl	62		30-130
2,4,6-Tribromophenol	57		15-110
4-Terphenyl-d14	62		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-15	Date Collected:	04/06/21 09:45
Client ID:	MW-BS22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 08:42
Analytical Date:	04/14/21 22:49		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-15	Date Collected:	04/06/21 09:45
Client ID:	MW-BS22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	51		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-15	Date Collected:	04/06/21 09:45
Client ID:	MW-BS22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/19/21 12:45		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS

Lab Number: L2117259

Project Number: 3252H

Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-16
Client ID: MW-S22-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 12:10
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/13/21 08:20
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-16	Date Collected:	04/06/21 12:10
Client ID:	MW-S22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	79		15-110
4-Terphenyl-d14	75		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-16 Date Collected: 04/06/21 12:10
Client ID: MW-S22-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water Extraction Method: EPA 3510C
Analytical Method: 97,8270D-SIM Extraction Date: 04/12/21 08:00
Analytical Date: 04/15/21 19:59
Analyst: DV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-16	Date Collected:	04/06/21 12:10
Client ID:	MW-S22-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	81		15-110
4-Terphenyl-d14	92		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-16
Client ID: MW-S22-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 12:10
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 13:16
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 19:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-17
Client ID: MW-S28-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 12:45
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/13/21 09:28
Analyst: JG
Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-17	Date Collected:	04/06/21 12:45
Client ID:	MW-S28-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	45		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	79		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-17	Date Collected:	04/06/21 12:45
Client ID:	MW-S28-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 08:00
Analytical Date:	04/15/21 18:08		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.13		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.09	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.06	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.10		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.04	J	ug/l	0.10	0.01	1
Chrysene	0.07	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.05	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.06	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.01	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.06	J	ug/l	0.10	0.01	1
Pyrene	0.12		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-17	Date Collected:	04/06/21 12:45
Client ID:	MW-S28-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	46		15-110
4-Terphenyl-d14	95		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-17	Date Collected:	04/06/21 12:45
Client ID:	MW-S28-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/20/21 09:02		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0932	J	ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-18
Client ID: MW-BS50-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:05
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/13/21 09:51
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-18	Date Collected:	04/06/21 13:05
Client ID:	MW-BS50-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	72		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	73		15-110
4-Terphenyl-d14	71		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259

Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-18
Client ID: MW-BS50-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:05
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 01:21
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.22		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.02	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.09	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-18	Date Collected:	04/06/21 13:05
Client ID:	MW-BS50-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-110
Phenol-d6	41		15-110
Nitrobenzene-d5	72		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	66		15-110
4-Terphenyl-d14	89		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-18	Date Collected:	04/06/21 13:05
Client ID:	MW-BS50-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/20/21 10:40		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	13.2		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259

Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-19
Client ID: HB-620-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 00:14
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-19	Date Collected:	04/06/21 13:50
Client ID:	HB-620-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	59		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	69		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-19	Date Collected:	04/06/21 13:50
Client ID:	HB-620-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 08:00
Analytical Date:	04/16/21 01:02		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.21		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.04	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.11		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-19	Date Collected:	04/06/21 13:50
Client ID:	HB-620-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	59		15-110
4-Terphenyl-d14	91		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-19	Date Collected:	04/06/21 13:50
Client ID:	HB-620-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/20/21 11:18		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-20
Client ID: HB-12-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 14:10
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 00:40
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-20	Date Collected:	04/06/21 14:10
Client ID:	HB-12-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	37		15-110
Nitrobenzene-d5	48		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	67		15-110
4-Terphenyl-d14	70		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-20
Client ID: HB-12-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 14:10
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 00:43
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-20	Date Collected:	04/06/21 14:10
Client ID:	HB-12-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	37		15-110
Nitrobenzene-d5	54		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	86		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-20	Date Collected:	04/06/21 14:10
Client ID:	HB-12-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/20/21 11:56		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0762	J	ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-21	Date Collected:	04/06/21 14:00
Client ID:	EQ BLANK2-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/11/21 01:37		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.88	0.384	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.88	0.373	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.88	0.224	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.88	0.426	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.88	0.309	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.88	0.231	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.88	0.212	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.88	0.354	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.88	0.222	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.88	1.26	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.88	0.648	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.88	0.294	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.88	0.475	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.88	0.286	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.88	1.14	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.88	1.06	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.88	0.611	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.88	0.245	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.88	0.923	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.88	0.758	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.88	0.350	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.88	0.308	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.88	0.234	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	47.1	21.4	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.88	0.317	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.77	1.17	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.77	1.08	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-21	Date Collected:	04/06/21 14:00
Client ID:	EQ BLANK2-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.88	0.580	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.71	1.90	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.88	0.261	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.88	0.276	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	100		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	71		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	94		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	129		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	83		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	93		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	115		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	96		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**185**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	83		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	106		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	99		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**205**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	97		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	108		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	102		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	124		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	121		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	92		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	81		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-21	Date Collected:	04/06/21 14:00
Client ID:	EQ BLANK2-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/17/21 21:14		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.88	0.546	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.8	6.94	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.8	6.26	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	47.1	20.9	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	47.1	21.2	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	74		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	36		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	29		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	52		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	47		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-22
Client ID: MW-S39-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:10
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 01:05
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-22	Date Collected:	04/06/21 13:10
Client ID:	MW-S39-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-22
Client ID: MW-S39-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:10
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 00:25
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-22	Date Collected:	04/06/21 13:10
Client ID:	MW-S39-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	61		15-110
4-Terphenyl-d14	94		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259

Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-22
Client ID: MW-S39-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:10
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 12:37
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 19:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-23
Client ID: MW-S39-04062021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:15
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 16:29
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-23	Date Collected:	04/06/21 13:15
Client ID:	MW-S39-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	62		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-23
Client ID: MW-S39-04062021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:15
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 00:06
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-23	Date Collected:	04/06/21 13:15
Client ID:	MW-S39-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		15-110
Phenol-d6	41		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	52		15-110
4-Terphenyl-d14	88		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-23	Date Collected:	04/06/21 13:15
Client ID:	MW-S39-04062021 DUP	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/20/21 13:19		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-24
Client ID: MW-SD39-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:00
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 16:51
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-24	Date Collected:	04/06/21 15:00
Client ID:	MW-SD39-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		15-110
Phenol-d6	45		15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	60		30-130
2,4,6-Tribromophenol	58		15-110
4-Terphenyl-d14	70		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-24
Client ID: MW-SD39-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:00
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 23:47
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.02	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.14		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.10		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-24	Date Collected:	04/06/21 15:00
Client ID:	MW-SD39-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	63		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	51		15-110
4-Terphenyl-d14	82		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-24	Date Collected:	04/06/21 15:00
Client ID:	MW-SD39-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/20/21 13:49		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.210		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-25
Client ID: MW-SD17-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:25
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 19:28
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-25
Client ID: MW-SD17-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:25
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	62		30-130
2,4,6-Tribromophenol	75		15-110
4-Terphenyl-d14	68		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259

Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-25
Client ID: MW-SD17-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:25
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 23:29
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.40		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.03	J	ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.27		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-25	Date Collected:	04/06/21 15:25
Client ID:	MW-SD17-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	30		15-110
Nitrobenzene-d5	69		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	**187**	Q	15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-25
Client ID: MW-SD17-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:25
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 14:38
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 19:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.376		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-25 RE
Client ID: MW-SD17-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:25
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 17:48
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 08:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.10	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-25 RE	Date Collected:	04/06/21 15:25
Client ID:	MW-SD17-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	53		30-130
2,4,6-Tribromophenol	83		15-110
4-Terphenyl-d14	76		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-26
Client ID: MW-SD61-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 14:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 17:37
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-26 | Date Collected: 04/06/21 14:45
Client ID: MW-SD61-04062021 | Date Received: 04/06/21
Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	57		15-110
4-Terphenyl-d14	70		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-26
Client ID: MW-SD61-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 14:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 02:32
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.02	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	0.02	J	ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.16		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.09	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-26	Date Collected:	04/06/21 14:45
Client ID:	MW-SD61-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	69		30-130
2-Fluorobiphenyl	71		30-130
2,4,6-Tribromophenol	48		15-110
4-Terphenyl-d14	77		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-26	Date Collected:	04/06/21 14:45
Client ID:	MW-SD61-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/20/21 15:33		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.149		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259

Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-27
Client ID: MW-S12-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:30
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/11/21 01:53
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 04/09/21 03:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.74	0.355	1
Perfluoropentanoic Acid (PFPeA)	0.477	J	ng/l	1.74	0.345	1
Perfluorobutanesulfonic Acid (PFBS)	0.407	J	ng/l	1.74	0.207	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.74	0.393	1
Perfluorohexanoic Acid (PFHxA)	0.397	J	ng/l	1.74	0.285	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.74	0.213	1
Perfluoroheptanoic Acid (PFHpA)	0.264	JF	ng/l	1.74	0.196	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.74	0.327	1
Perfluorooctanoic Acid (PFOA)	0.564	J	ng/l	1.74	0.205	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.74	1.16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.74	0.599	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.74	0.272	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.74	0.439	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.74	0.264	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.74	1.05	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.74	0.975	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.74	0.564	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.74	0.226	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.74	0.853	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.74	0.700	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.74	0.324	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.74	0.285	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.74	0.216	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	43.5	19.8	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.74	0.292	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.48	1.08	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.48	0.999	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-27	Date Collected:	04/06/21 15:30
Client ID:	MW-S12-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.74	0.536	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.35	1.76	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.74	0.241	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.74	0.255	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	70		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**47**	Q	62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	100		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**52**	Q	57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	65		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	111		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	70		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**179**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	66		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	96		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	85		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**189**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	68		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	91		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	73		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	113		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	115		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	65		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	69		10-206

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-27	Date Collected:	04/06/21 15:30
Client ID:	MW-S12-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/17/21 21:21		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.74	0.505	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.4	6.41	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.4	5.78	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	43.5	19.3	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	43.5	19.6	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	75		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	24		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	18		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	55		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	44		10-187

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-27
Client ID: MW-S12-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 15:30
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 18:00
Analyst: SZ
Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-27	Date Collected:	04/06/21 15:30
Client ID:	MW-S12-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	58		30-130
2,4,6-Tribromophenol	46		15-110
4-Terphenyl-d14	62		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-27
Client ID: MW-S12-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:30
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 02:51
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.40		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.15		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-27 Date Collected: 04/06/21 15:30
Client ID: MW-S12-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	46		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-27
Client ID: MW-S12-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:30
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 06:55
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 19:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-28
Client ID: FIELD BLANK1-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:45
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/11/21 02:10
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 04/09/21 03:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.90	0.388	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.90	0.377	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.90	0.226	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.90	0.430	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.90	0.312	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.90	0.233	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.90	0.214	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.90	0.358	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.90	0.225	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.90	1.27	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.90	0.655	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.90	0.297	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.90	0.480	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.90	0.289	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.90	1.15	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.90	1.07	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.90	0.617	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.90	0.247	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.90	0.933	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.90	0.765	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.90	0.354	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.90	0.311	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.90	0.236	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	47.6	21.6	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.90	0.320	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.81	1.18	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.81	1.09	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-28	Date Collected:	04/06/21 15:45
Client ID:	FIELD BLANK1-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.90	0.586	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.76	1.92	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.90	0.263	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.90	0.279	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	97		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	70		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	87		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	131		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	79		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	88		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	107		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**190**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	78		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	96		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	92		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**210**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	80		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	101		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	100		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	109		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	109		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	82		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	70		10-206

Project Name: NUCLEAR METALS

Lab Number: L2117259

Project Number: 3252H

Report Date: 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-28	Date Collected:	04/06/21 15:45
Client ID:	FIELD BLANK1-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/17/21 21:28		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.90	0.552	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	19.0	7.00	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	19.0	6.32	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	47.6	21.1	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	47.6	21.4	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	69		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	24		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	19		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	44		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	42		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-29
Client ID: OW-2-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 16:05
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 19:53
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-29	Date Collected:	04/06/21 16:05
Client ID:	OW-2-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-29
Client ID: OW-2-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 16:05
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 03:09
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-29	Date Collected:	04/06/21 16:05
Client ID:	OW-2-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	52		15-110
4-Terphenyl-d14	79		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-29	Date Collected:	04/06/21 16:05
Client ID:	OW-2-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/21/21 07:19		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.662		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117259

Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-30
Client ID: MW-S24-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 16:40
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 22:09
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-30	Date Collected:	04/06/21 16:40
Client ID:	MW-S24-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	58		30-130
2,4,6-Tribromophenol	17		15-110
4-Terphenyl-d14	62		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-30	Date Collected:	04/06/21 16:40
Client ID:	MW-S24-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 08:00
Analytical Date:	04/15/21 03:28		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.10	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.08	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.09	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.20		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.06	J	ug/l	0.10	0.01	1
Chrysene	0.13		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.11		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.04	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.03	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.11		ug/l	0.10	0.01	1
Pyrene	0.08	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-30 Date Collected: 04/06/21 16:40
Client ID: MW-S24-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	20		15-110
4-Terphenyl-d14	78		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-30	Date Collected:	04/06/21 16:40
Client ID:	MW-S24-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/09/21 19:45
Analytical Date:	04/21/21 07:43		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.135	J	ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	56		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/10/21 22:34	Extraction Date:	04/09/21 03:42
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03,21,27-28 Batch: WG1484163-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	1.65	J	ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	0.264	JF	ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2.46		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	0.376	J	ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/10/21 22:34	Extraction Date:	04/09/21 03:42
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03,21,27-28 Batch: WG1484163-1					
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24
Perfluorooctadecanoic Acid (PFODA)	1.46	JF	ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/10/21 22:34
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 04/09/21 03:42

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03,21,27-28 Batch: WG1484163-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	98		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	68		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	89		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	133		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	78		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	90		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	110		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**182**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	80		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	98		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	97		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**204**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	102		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	107		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	52		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	110		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	127		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	121		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	94		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	86		10-206

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/13/21 03:26
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/09/21 03:42

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03,21,27-28 Batch: WG1484163-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	47		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	45		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	57		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	57		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/10/21 20:50	Extraction Date:	04/09/21 07:51
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-05,07,15 Batch: WG1484239-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	13		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/10/21 20:50
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-05,07,15 Batch: WG1484239-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/10/21 20:50
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:51

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-05,07,15 Batch: WG1484239-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	37		15-110
Nitrobenzene-d5	59		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	61		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 15:00
Analyst: WR
Extraction Method: EPA 3510C
Extraction Date: 04/09/21 07:54

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-05,07,15 Batch: WG1484244-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	0.01	J	ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/19/21 15:00	Extraction Date:	04/09/21 07:54
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-05,07,15 Batch: WG1484244-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	52		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	102		15-110
4-Terphenyl-d14	75		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/13/21 02:48	Extraction Date:	04/09/21 13:00
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-05,07-13 Batch: WG1484460-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 06:16
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/09/21 19:45

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 14-20,22-27,29-30 Batch: WG1484537-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	66		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/12/21 23:34
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485004-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/12/21 23:34
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485004-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/12/21 23:34
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485004-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	43		15-110
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	64		15-110
4-Terphenyl-d14	80		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 16:16
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485070-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/15/21 16:16	Extraction Date:	04/12/21 08:00
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485070-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	59		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/13/21 23:21
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 15:22

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 10 Batch: WG1485277-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	3.3		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/13/21 23:21
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 15:22

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 10 Batch: WG1485277-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	1.2	J	ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/13/21 23:21
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 15:22

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 10 Batch: WG1485277-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	52		15-110
4-Terphenyl-d14	69		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/13/21 23:46
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 15:25

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 10 Batch: WG1485279-1					
Acenaphthene	0.11		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	3.7		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	0.07	J	ug/l	0.10	0.01
Phenanthrene	0.10	J	ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	1.4		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/13/21 23:46	Extraction Date:	04/12/21 15:25
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 10 Batch: WG1485279-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	87		15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 13:30
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 25 Batch: WG1488688-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/21/21 13:30	Extraction Date:	04/21/21 00:58
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 25 Batch: WG1488688-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	89		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	**113**	Q	15-110
4-Terphenyl-d14	78		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 Batch: WG1484163-2								
Perfluorobutanoic Acid (PFBA)	112		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	116		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	122		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	123		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	114		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	97		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	115		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	106		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	121		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	124		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	120		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	134		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	118		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	130		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	116		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	117		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	121		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	129		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	121		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	114		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	110		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	111		-		67-153	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 Batch: WG1484163-2								
Perfluorotridecanoic Acid (PFTrDA)	143		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	124		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	123		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	120		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	144		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	**229**	Q	-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	135		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	150		-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	86		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	74		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 Batch: WG1484163-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	95				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	66				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	87				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	136				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	88				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	107				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**174**	Q			14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	75				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	89				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**188**	Q			10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	94				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	91				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	54				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	101				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	105				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	108				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	90				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	73				10-206

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 Batch: WG1484163-2								
Perfluorooctanesulfonamide (FOSA)	102		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	125		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	122		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	124		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	119		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	63				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	46				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	44				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	52				10-187

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-05,07,15 Batch: WG1484239-2 WG1484239-3								
Acenaphthene	61		53		40-140	14		20
1,2,4-Trichlorobenzene	58		49		40-140	17		20
Hexachlorobenzene	60		57		40-140	5		20
Bis(2-chloroethyl)ether	62		51		40-140	19		20
2-Chloronaphthalene	62		53		40-140	16		20
1,2-Dichlorobenzene	58		48		40-140	19		20
1,3-Dichlorobenzene	57		46		40-140	**21**	Q	20
1,4-Dichlorobenzene	56		47		40-140	17		20
3,3'-Dichlorobenzidine	41		47		40-140	14		20
2,4-Dinitrotoluene	70		69		40-140	1		20
2,6-Dinitrotoluene	73		71		40-140	3		20
Azobenzene	62		58		40-140	7		20
Fluoranthene	64		60		40-140	6		20
4-Bromophenyl phenyl ether	62		58		40-140	7		20
Bis(2-chloroisopropyl)ether	62		52		40-140	18		20
Bis(2-chloroethoxy)methane	62		56		40-140	10		20
Hexachlorobutadiene	55		44		40-140	**22**	Q	20
Hexachloroethane	57		46		40-140	**21**	Q	20
Isophorone	60		52		40-140	14		20
Naphthalene	59		48		40-140	**21**	Q	20
Nitrobenzene	71		60		40-140	17		20
Bis(2-ethylhexyl)phthalate	64		68		40-140	6		20
Butyl benzyl phthalate	67		73		40-140	9		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-05,07,15 Batch: WG1484239-2 WG1484239-3								
Di-n-butylphthalate	60		59		40-140	2		20
Di-n-octylphthalate	64		68		40-140	6		20
Diethyl phthalate	64		64		40-140	0		20
Dimethyl phthalate	67		66		40-140	2		20
Benzo(a)anthracene	63		61		40-140	3		20
Benzo(a)pyrene	61		60		40-140	2		20
Benzo(b)fluoranthene	63		60		40-140	5		20
Benzo(k)fluoranthene	60		59		40-140	2		20
Chrysene	62		58		40-140	7		20
Acenaphthylene	61		54		40-140	12		20
Anthracene	62		56		40-140	10		20
Benzo(ghi)perylene	62		56		40-140	10		20
Fluorene	60		56		40-140	7		20
Phenanthrene	62		55		40-140	12		20
Dibenzo(a,h)anthracene	63		58		40-140	8		20
Indeno(1,2,3-cd)pyrene	61		57		40-140	7		20
Pyrene	61		58		40-140	5		20
Aniline	**28**	Q	**32**	Q	40-140	13		20
4-Chloroaniline	46		43		40-140	7		20
Dibenzofuran	59		54		40-140	9		20
2-Methylnaphthalene	60		49		40-140	20		20
Acetophenone	61		53		40-140	14		20
2,4,6-Trichlorophenol	64		62		30-130	3		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-05,07,15 Batch: WG1484239-2 WG1484239-3								
2-Chlorophenol	63		53		30-130	17		20
2,4-Dichlorophenol	69		63		30-130	9		20
2,4-Dimethylphenol	59		60		30-130	2		20
2-Nitrophenol	80		67		30-130	18		20
4-Nitrophenol	66		64		30-130	3		20
2,4-Dinitrophenol	91		84		30-130	8		20
Pentachlorophenol	75		79		30-130	5		20
Phenol	47		40		30-130	16		20
2-Methylphenol	60		55		30-130	9		20
3-Methylphenol/4-Methylphenol	63		58		30-130	8		20
2,4,5-Trichlorophenol	69		63		30-130	9		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	56		47		15-110
Phenol-d6	48		40		15-110
Nitrobenzene-d5	69		60		30-130
2-Fluorobiphenyl	60		51		30-130
2,4,6-Tribromophenol	69		70		15-110
4-Terphenyl-d14	60		58		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-05,07,15 Batch: WG1484244-2 WG1484244-3								
Acenaphthene	52		56		40-140	7		20
2-Chloronaphthalene	55		61		40-140	10		20
Fluoranthene	57		62		40-140	8		20
Hexachlorobutadiene	59		65		40-140	10		20
Naphthalene	51		54		40-140	6		20
Benzo(a)anthracene	56		62		40-140	10		20
Benzo(a)pyrene	52		63		40-140	19		20
Benzo(b)fluoranthene	59		65		40-140	10		20
Benzo(k)fluoranthene	56		64		40-140	13		20
Chrysene	56		62		40-140	10		20
Acenaphthylene	55		62		40-140	12		20
Anthracene	51		57		40-140	11		20
Benzo(ghi)perylene	56		65		40-140	15		20
Fluorene	56		61		40-140	9		20
Phenanthrene	53		58		40-140	9		20
Dibenzo(a,h)anthracene	58		66		40-140	13		20
Indeno(1,2,3-cd)pyrene	56		66		40-140	16		20
Pyrene	58		62		40-140	7		20
2-Methylnaphthalene	52		57		40-140	9		20
Pentachlorophenol	52		45		30-130	14		20
Hexachlorobenzene	71		77		40-140	8		20
Hexachloroethane	47		55		40-140	16		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-05,07,15 Batch: WG1484244-2 WG1484244-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	34		40		15-110
Phenol-d6	34		39		15-110
Nitrobenzene-d5	76		88		30-130
2-Fluorobiphenyl	56		62		30-130
2,4,6-Tribromophenol	67		82		15-110
4-Terphenyl-d14	62		67		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-05,07-13 Batch: WG1484460-2 WG1484460-3								
1,4-Dioxane	106		108		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	50		52		15-110

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 14-20,22-27,29-30 Batch: WG1484537-2 WG1484537-3								
1,4-Dioxane	109		111		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	49		70		15-110

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485004-2 WG1485004-3								
Acenaphthene	67		64		40-140	5		20
1,2,4-Trichlorobenzene	58		54		40-140	7		20
Hexachlorobenzene	67		65		40-140	3		20
Bis(2-chloroethyl)ether	69		66		40-140	4		20
2-Chloronaphthalene	63		60		40-140	5		20
1,2-Dichlorobenzene	60		54		40-140	11		20
1,3-Dichlorobenzene	56		52		40-140	7		20
1,4-Dichlorobenzene	57		52		40-140	9		20
3,3'-Dichlorobenzidine	56		57		40-140	2		20
2,4-Dinitrotoluene	75		76		40-140	1		20
2,6-Dinitrotoluene	72		76		40-140	5		20
Azobenzene	68		67		40-140	1		20
Fluoranthene	71		69		40-140	3		20
4-Bromophenyl phenyl ether	69		68		40-140	1		20
Bis(2-chloroisopropyl)ether	71		68		40-140	4		20
Bis(2-chloroethoxy)methane	71		69		40-140	3		20
Hexachlorobutadiene	50		46		40-140	8		20
Hexachloroethane	54		49		40-140	10		20
Isophorone	66		66		40-140	0		20
Naphthalene	61		59		40-140	3		20
Nitrobenzene	78		74		40-140	5		20
Bis(2-ethylhexyl)phthalate	71		72		40-140	1		20
Butyl benzyl phthalate	69		73		40-140	6		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485004-2 WG1485004-3								
Di-n-butylphthalate	65		67		40-140	3		20
Di-n-octylphthalate	68		69		40-140	1		20
Diethyl phthalate	70		71		40-140	1		20
Dimethyl phthalate	71		70		40-140	1		20
Benzo(a)anthracene	75		70		40-140	7		20
Benzo(a)pyrene	74		67		40-140	10		20
Benzo(b)fluoranthene	78		73		40-140	7		20
Benzo(k)fluoranthene	71		64		40-140	10		20
Chrysene	75		70		40-140	7		20
Acenaphthylene	63		62		40-140	2		20
Anthracene	73		67		40-140	9		20
Benzo(ghi)perylene	77		68		40-140	12		20
Fluorene	69		66		40-140	4		20
Phenanthrene	71		66		40-140	7		20
Dibenzo(a,h)anthracene	78		69		40-140	12		20
Indeno(1,2,3-cd)pyrene	78		71		40-140	9		20
Pyrene	68		67		40-140	1		20
Aniline	42		**37**	Q	40-140	13		20
4-Chloroaniline	52		57		40-140	9		20
Dibenzofuran	67		63		40-140	6		20
2-Methylnaphthalene	60		58		40-140	3		20
Acetophenone	70		68		40-140	3		20
2,4,6-Trichlorophenol	70		70		30-130	0		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485004-2 WG1485004-3								
2-Chlorophenol	71		68		30-130	4		20
2,4-Dichlorophenol	76		75		30-130	1		20
2,4-Dimethylphenol	70		64		30-130	9		20
2-Nitrophenol	88		87		30-130	1		20
4-Nitrophenol	64		65		30-130	2		20
2,4-Dinitrophenol	88		94		30-130	7		20
Pentachlorophenol	73		80		30-130	9		20
Phenol	50		48		30-130	4		20
2-Methylphenol	68		65		30-130	5		20
3-Methylphenol/4-Methylphenol	70		67		30-130	4		20
2,4,5-Trichlorophenol	72		74		30-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	60		59		15-110
Phenol-d6	49		49		15-110
Nitrobenzene-d5	78		75		30-130
2-Fluorobiphenyl	67		64		30-130
2,4,6-Tribromophenol	79		78		15-110
4-Terphenyl-d14	66		65		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485070-2 WG1485070-3								
Acenaphthene	77		70		40-140	10		20
2-Chloronaphthalene	77		68		40-140	12		20
Fluoranthene	85		79		40-140	7		20
Hexachlorobutadiene	74		65		40-140	13		20
Naphthalene	78		70		40-140	11		20
Benzo(a)anthracene	79		72		40-140	9		20
Benzo(a)pyrene	85		79		40-140	7		20
Benzo(b)fluoranthene	83		80		40-140	4		20
Benzo(k)fluoranthene	91		83		40-140	9		20
Chrysene	81		76		40-140	6		20
Acenaphthylene	82		72		40-140	13		20
Anthracene	81		75		40-140	8		20
Benzo(ghi)perylene	83		76		40-140	9		20
Fluorene	80		72		40-140	11		20
Phenanthrene	79		74		40-140	7		20
Dibenzo(a,h)anthracene	87		80		40-140	8		20
Indeno(1,2,3-cd)pyrene	84		78		40-140	7		20
Pyrene	85		79		40-140	7		20
2-Methylnaphthalene	79		70		40-140	12		20
Pentachlorophenol	69		56		30-130	**21**	Q	20
Hexachlorobenzene	77		71		40-140	8		20
Hexachloroethane	73		63		40-140	15		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 Batch: WG1485070-2 WG1485070-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	63		56		15-110
Phenol-d6	54		49		15-110
Nitrobenzene-d5	76		66		30-130
2-Fluorobiphenyl	77		67		30-130
2,4,6-Tribromophenol	83		75		15-110
4-Terphenyl-d14	87		80		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 10 Batch: WG1485277-2 WG1485277-3								
Acenaphthene	69		83		40-140	18		20
1,2,4-Trichlorobenzene	64		72		40-140	12		20
Hexachlorobenzene	65		80		40-140	**21**	Q	20
Bis(2-chloroethyl)ether	70		76		40-140	8		20
2-Chloronaphthalene	66		80		40-140	19		20
1,2-Dichlorobenzene	64		70		40-140	9		20
1,3-Dichlorobenzene	61		69		40-140	12		20
1,4-Dichlorobenzene	62		70		40-140	12		20
3,3'-Dichlorobenzidine	46		46		40-140	0		20
2,4-Dinitrotoluene	72		90		40-140	**22**	Q	20
2,6-Dinitrotoluene	72		95		40-140	**28**	Q	20
Azobenzene	70		86		40-140	**21**	Q	20
Fluoranthene	67		86		40-140	**25**	Q	20
4-Bromophenyl phenyl ether	68		84		40-140	**21**	Q	20
Bis(2-chloroisopropyl)ether	73		82		40-140	12		20
Bis(2-chloroethoxy)methane	71		79		40-140	11		20
Hexachlorobutadiene	61		74		40-140	19		20
Hexachloroethane	64		72		40-140	12		20
Isophorone	68		77		40-140	12		20
Naphthalene	63		79		40-140	**23**	Q	20
Nitrobenzene	76		87		40-140	13		20
Bis(2-ethylhexyl)phthalate	81		104		40-140	**25**	Q	20
Butyl benzyl phthalate	72		94		40-140	**27**	Q	20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 10 Batch: WG1485277-2 WG1485277-3								
Di-n-butylphthalate	70		92		40-140	**27**	Q	20
Di-n-octylphthalate	77		101		40-140	**27**	Q	20
Diethyl phthalate	70		91		40-140	**26**	Q	20
Dimethyl phthalate	69		87		40-140	**23**	Q	20
Benzo(a)anthracene	72		88		40-140	20		20
Benzo(a)pyrene	65		82		40-140	**23**	Q	20
Benzo(b)fluoranthene	67		85		40-140	**24**	Q	20
Benzo(k)fluoranthene	68		87		40-140	**25**	Q	20
Chrysene	71		86		40-140	19		20
Acenaphthylene	63		79		40-140	**23**	Q	20
Anthracene	69		86		40-140	**22**	Q	20
Benzo(ghi)perylene	69		88		40-140	**24**	Q	20
Fluorene	67		82		40-140	20		20
Phenanthrene	68		84		40-140	**21**	Q	20
Dibenzo(a,h)anthracene	72		89		40-140	**21**	Q	20
Indeno(1,2,3-cd)pyrene	69		86		40-140	**22**	Q	20
Pyrene	64		82		40-140	**25**	Q	20
Aniline	**31**	Q	**25**	Q	40-140	**21**	Q	20
4-Chloroaniline	**34**	Q	40		40-140	16		20
Dibenzofuran	66		81		40-140	20		20
2-Methylnaphthalene	64		78		40-140	20		20
Acetophenone	70		78		40-140	11		20
2,4,6-Trichlorophenol	69		88		30-130	**24**	Q	20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 10 Batch: WG1485277-2 WG1485277-3								
2-Chlorophenol	68		77		30-130	12		20
2,4-Dichlorophenol	74		86		30-130	15		20
2,4-Dimethylphenol	61		70		30-130	14		20
2-Nitrophenol	90		103		30-130	13		20
4-Nitrophenol	58		80		30-130	**32**	Q	20
2,4-Dinitrophenol	78		106		30-130	**30**	Q	20
Pentachlorophenol	70		95		30-130	**30**	Q	20
Phenol	45		50		30-130	11		20
2-Methylphenol	61		69		30-130	12		20
3-Methylphenol/4-Methylphenol	65		72		30-130	10		20
2,4,5-Trichlorophenol	71		90		30-130	**24**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	55		62		15-110
Phenol-d6	45		51		15-110
Nitrobenzene-d5	78		87		30-130
2-Fluorobiphenyl	66		80		30-130
2,4,6-Tribromophenol	75		95		15-110
4-Terphenyl-d14	65		85		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 10 Batch: WG1485279-2 WG1485279-3								
Acenaphthene	80		69		40-140	15		20
2-Chloronaphthalene	84		72		40-140	15		20
Fluoranthene	95		85		40-140	11		20
Hexachlorobutadiene	89		75		40-140	17		20
Naphthalene	76		65		40-140	16		20
Benzo(a)anthracene	86		78		40-140	10		20
Benzo(a)pyrene	86		77		40-140	11		20
Benzo(b)fluoranthene	94		81		40-140	15		20
Benzo(k)fluoranthene	91		86		40-140	6		20
Chrysene	90		80		40-140	12		20
Acenaphthylene	84		72		40-140	15		20
Anthracene	81		71		40-140	13		20
Benzo(ghi)perylene	83		75		40-140	10		20
Fluorene	87		76		40-140	13		20
Phenanthrene	82		73		40-140	12		20
Dibenzo(a,h)anthracene	88		80		40-140	10		20
Indeno(1,2,3-cd)pyrene	84		75		40-140	11		20
Pyrene	97		87		40-140	11		20
2-Methylnaphthalene	80		68		40-140	16		20
Pentachlorophenol	75		70		30-130	7		20
Hexachlorobenzene	87		90		40-140	3		20
Hexachloroethane	73		62		40-140	16		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 10 Batch: WG1485279-2 WG1485279-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	53		45		15-110
Phenol-d6	49		42		15-110
Nitrobenzene-d5	114		96		30-130
2-Fluorobiphenyl	85		71		30-130
2,4,6-Tribromophenol	**117**	Q	101		15-110
4-Terphenyl-d14	107		94		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 25 Batch: WG1488688-2 WG1488688-3								
Acenaphthene	73		78		40-140	7		20
2-Chloronaphthalene	71		76		40-140	7		20
Fluoranthene	78		80		40-140	3		20
Hexachlorobutadiene	70		78		40-140	11		20
Naphthalene	68		84		40-140	**21**	Q	20
Benzo(a)anthracene	72		77		40-140	7		20
Benzo(a)pyrene	75		78		40-140	4		20
Benzo(b)fluoranthene	81		77		40-140	5		20
Benzo(k)fluoranthene	78		84		40-140	7		20
Chrysene	82		84		40-140	2		20
Acenaphthylene	73		78		40-140	7		20
Anthracene	74		76		40-140	3		20
Benzo(ghi)perylene	75		80		40-140	6		20
Fluorene	77		86		40-140	11		20
Phenanthrene	74		77		40-140	4		20
Dibenzo(a,h)anthracene	77		84		40-140	9		20
Indeno(1,2,3-cd)pyrene	73		78		40-140	7		20
Pyrene	80		81		40-140	1		20
2-Methylnaphthalene	69		77		40-140	11		20
Pentachlorophenol	87		97		30-130	11		20
Hexachlorobenzene	75		76		40-140	1		20
Hexachloroethane	64		73		40-140	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 25 Batch: WG1488688-2 WG1488688-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	72		103		15-110
Phenol-d6	63		89		15-110
Nitrobenzene-d5	96		107		30-130
2-Fluorobiphenyl	70		77		30-130
2,4,6-Tribromophenol	106		109		15-110
4-Terphenyl-d14	83		84		30-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 QC Batch ID: WG1484163-3 QC Sample: L2116995-08 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	0.548J	36.4	41.4	112		-	-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	2.93	36.4	45.9	118		-	-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	0.616J	32.3	41.2	126		-	-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	34.1	41.9	123		-	-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	1.97	36.4	45.8	120		-	-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	34.2	34.0	99		-	-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	0.681J	36.4	43.1	117		-	-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	1.10J	33.3	37.3	109		-	-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	1.82	36.4	47.0	124		-	-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	9.04	34.6	51.2	122		-	-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	34.6	43.5	126		-	-		61-179	-		30
Perfluorononanoic Acid (PFNA)	0.491J	36.4	51.0	139		-	-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	7.30	33.8	48.8	123		-	-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	ND	36.4	47.3	130		-	-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	34.9	46.7	134		-	-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	35	44.2	126		-	-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	36.4	49.1	135		-	-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	36.4	50.6	139		-	-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	35.1	48.1	137		-	-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	ND	36.4	38.8	107		-	-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	36.4	41.3	113		-	-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	ND	36.4	42.9	118		-	-		67-153	-		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 QC Batch ID: WG1484163-3 QC Sample: L2116995-08 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	36.4	53.6	147		-	-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	36.4	44.9	123		-	-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	728	873F	120		-	-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	34.4	39.0	114		-	-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	36.4	51.0	140		-	-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	ND	36.4	122F	**335**	Q	-	-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	35.2	49.5	141		-	-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	35.1	47.7	136		-	-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	33.9	29.4	87		-	-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	34.4	26.9	78		-	-		52-156	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	364	477	131		-	-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	364	475	131		-	-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	364	433	119		-	-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	364	428	118		-	-		66-176	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**174**	Q			10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**144**	Q			12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**174**	Q			14-147

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 QC Batch ID: WG1484163-3 QC Sample: L2116995-08 Client ID: MS Sample

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	79				10-165
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	57				10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	57				10-189
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	78				27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	75				24-116
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	49				10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	52				10-161
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	80				55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	79				62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	67				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	78				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	102				71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	96				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	122				22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	76				10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	86				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**59**	Q			62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	78				10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	87				69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	80				62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	67				59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	82				70-131

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 14-20,22-27,29-30 QC Batch ID: WG1484537-4 WG1484537-5 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
1,4-Dioxane	0.308	5	6.05	115		6.49	114		30-140	7		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		50		15-110

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 14-20,22-27,29-30 QC Batch ID: WG1484537-6 WG1484537-7 QC Sample: L2117259-17 Client ID: MW-S28-04062021												
1,4-Dioxane	0.0932J	4.81	5.57	116		6.15	118		30-140	10		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		48		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 QC Batch ID: WG1485004-4 WG1485004-5 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
1,2,4-Trichlorobenzene	ND	18.2	11	61		10	55		40-140	10		20
Bis(2-chloroethyl)ether	ND	18.2	14	77		12	66		40-140	15		20
1,2-Dichlorobenzene	ND	18.2	11	61		9.8	54		40-140	12		20
1,3-Dichlorobenzene	ND	18.2	11	61		9.5	52		40-140	15		20
1,4-Dichlorobenzene	ND	18.2	11	61		9.5	52		40-140	15		20
3,3'-Dichlorobenzidine	ND	18.2	8.6	47		8.1	45		40-140	6		20
2,4-Dinitrotoluene	ND	18.2	14	77		14	77		40-140	0		20
2,6-Dinitrotoluene	ND	18.2	14	77		13	72		40-140	7		20
Azobenzene	ND	18.2	13	72		12	66		40-140	8		20
4-Bromophenyl phenyl ether	ND	18.2	13	72		12	66		40-140	8		20
Bis(2-chloroisopropyl)ether	ND	18.2	14	77		12	66		40-140	15		20
Bis(2-chloroethoxy)methane	ND	18.2	14	77		12	66		40-140	15		20
Isophorone	ND	18.2	13	72		12	66		40-140	8		20
Nitrobenzene	ND	18.2	15	83		13	72		40-140	14		20
Bis(2-ethylhexyl)phthalate	ND	18.2	15	83		14	77		40-140	7		20
Butyl benzyl phthalate	ND	18.2	15	83		13	72		40-140	14		20
Di-n-butylphthalate	ND	18.2	14	77		12	66		40-140	15		20
Di-n-octylphthalate	ND	18.2	15	83		13	72		40-140	14		20
Diethyl phthalate	ND	18.2	14	77		13	72		40-140	7		20
Dimethyl phthalate	ND	18.2	14	77		12	66		40-140	15		20
Aniline	ND	18.2	2.6	**14**	Q	4.0	**22**	Q	40-140	**42**	Q	20
4-Chloroaniline	ND	18.2	7.7	42		7.4	41		40-140	4		20
Dibenzofuran	ND	18.2	13	72		12	66		40-140	8		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 QC Batch ID: WG1485004-4 WG1485004-5 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
Acetophenone	ND	18.2	14	77		12	66		40-140	15		20
2,4,6-Trichlorophenol	ND	18.2	14	77		12	66		30-130	15		20
2-Chlorophenol	ND	18.2	14	77		12	66		30-130	15		20
2,4-Dichlorophenol	ND	18.2	15	83		13	72		30-130	14		20
2,4-Dimethylphenol	ND	18.2	8.1	45		9.4	52		30-130	15		20
2-Nitrophenol	ND	18.2	18	99		16	88		30-130	12		20
4-Nitrophenol	ND	18.2	15	83		13	72		30-130	14		20
2,4-Dinitrophenol	ND	18.2	19J	100		18J	99		30-130	5		20
Phenol	ND	18.2	10	55		9.5	52		30-130	5		20
2-Methylphenol	ND	18.2	12	66		11	61		30-130	9		20
3-Methylphenol/4-Methylphenol	ND	18.2	13	72		12	66		30-130	8		20
2,4,5-Trichlorophenol	ND	18.2	14	77		13	72		30-130	7		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	81		75		15-110
2-Fluorobiphenyl	70		62		30-130
2-Fluorophenol	67		58		15-110
4-Terphenyl-d14	72		62		30-130
Nitrobenzene-d5	84		73		30-130
Phenol-d6	56		53		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 QC Batch ID: WG1485004-6 WG1485004-7 QC Sample: L2117259-17 Client ID: MW-S28-04062021												
1,2,4-Trichlorobenzene	ND	18.2	12	66		9.9	54		40-140	19		20
Bis(2-chloroethyl)ether	ND	18.2	13	72		11	61		40-140	17		20
1,2-Dichlorobenzene	ND	18.2	11	61		9.5	52		40-140	15		20
1,3-Dichlorobenzene	ND	18.2	11	61		9.1	50		40-140	19		20
1,4-Dichlorobenzene	ND	18.2	11	61		9.2	51		40-140	18		20
3,3'-Dichlorobenzidine	ND	18.2	10	55		12	66		40-140	18		20
2,4-Dinitrotoluene	ND	18.2	15	83		15	83		40-140	0		20
2,6-Dinitrotoluene	ND	18.2	16	88		15	83		40-140	6		20
Azobenzene	ND	18.2	14	77		13	72		40-140	7		20
4-Bromophenyl phenyl ether	ND	18.2	14	77		13	72		40-140	7		20
Bis(2-chloroisopropyl)ether	ND	18.2	14	77		11	61		40-140	**24**	Q	20
Bis(2-chloroethoxy)methane	ND	18.2	14	77		12	66		40-140	15		20
Isophorone	ND	18.2	14	77		12	66		40-140	15		20
Nitrobenzene	ND	18.2	15	83		13	72		40-140	14		20
Bis(2-ethylhexyl)phthalate	ND	18.2	16	88		16	88		40-140	0		20
Butyl benzyl phthalate	ND	18.2	17	94		16	88		40-140	6		20
Di-n-butylphthalate	ND	18.2	14	77		14	77		40-140	0		20
Di-n-octylphthalate	ND	18.2	17	94		16	88		40-140	6		20
Diethyl phthalate	ND	18.2	15	83		14	77		40-140	7		20
Dimethyl phthalate	ND	18.2	15	83		14	77		40-140	7		20
Aniline	ND	18.2	4.8	**26**	Q	7.9	43		40-140	**49**	Q	20
4-Chloroaniline	ND	18.2	9.1	50		9.6	53		40-140	5		20
Dibenzofuran	ND	18.2	13	72		12	66		40-140	8		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 QC Batch ID: WG1485004-6 WG1485004-7 QC Sample: L2117259-17 Client ID: MW-S28-04062021												
Acetophenone	ND	18.2	14	77		11	61		40-140	**24**	Q	20
2,4,6-Trichlorophenol	ND	18.2	15	83		13	72		30-130	14		20
2-Chlorophenol	ND	18.2	14	77		12	66		30-130	15		20
2,4-Dichlorophenol	ND	18.2	15	83		13	72		30-130	14		20
2,4-Dimethylphenol	ND	18.2	13	72		12	66		30-130	8		20
2-Nitrophenol	ND	18.2	18	99		15	83		30-130	18		20
4-Nitrophenol	ND	18.2	16	88		15	83		30-130	6		20
2,4-Dinitrophenol	ND	18.2	20	110		18J	99		30-130	11		20
Phenol	ND	18.2	10	55		8.9	49		30-130	12		20
2-Methylphenol	ND	18.2	13	72		11	61		30-130	17		20
3-Methylphenol/4-Methylphenol	ND	18.2	14	77		12	66		30-130	15		20
2,4,5-Trichlorophenol	ND	18.2	16	88		14	77		30-130	13		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	88		84		15-110
2-Fluorobiphenyl	69		63		30-130
2-Fluorophenol	67		54		15-110
4-Terphenyl-d14	78		74		30-130
Nitrobenzene-d5	85		69		30-130
Phenol-d6	56		49		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 QC Batch ID: WG1485070-4 WG1485070-5 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
Acenaphthene	ND	18.2	15	83		13	72		40-140	14		20
2-Chloronaphthalene	ND	18.2	14	77		13	72		40-140	7		20
Fluoranthene	ND	18.2	18	99		16	88		40-140	12		20
Hexachlorobutadiene	ND	18.2	11	61		10	55		40-140	10		20
Naphthalene	ND	18.2	14	77		12	66		40-140	15		20
Benzo(a)anthracene	ND	18.2	16	88		15	83		40-140	6		20
Benzo(a)pyrene	ND	18.2	18	99		17	94		40-140	6		20
Benzo(b)fluoranthene	ND	18.2	18	99		16	88		40-140	12		20
Benzo(k)fluoranthene	ND	18.2	18	99		17	94		40-140	6		20
Chrysene	ND	18.2	16	88		15	83		40-140	6		20
Acenaphthylene	ND	18.2	16	88		14	77		40-140	13		20
Anthracene	ND	18.2	16	88		15	83		40-140	6		20
Benzo(ghi)perylene	ND	18.2	17	94		16	88		40-140	6		20
Fluorene	ND	18.2	16	88		14	77		40-140	13		20
Phenanthrene	ND	18.2	16	88		14	77		40-140	13		20
Dibenzo(a,h)anthracene	ND	18.2	18	99		16	88		40-140	12		20
Indeno(1,2,3-cd)pyrene	ND	18.2	18	99		16	88		40-140	12		20
Pyrene	ND	18.2	17	94		16	88		40-140	6		20
2-Methylnaphthalene	ND	18.2	14	77		13	72		40-140	7		20
Pentachlorophenol	ND	18.2	17	94		14	77		30-130	19		20
Hexachlorobenzene	ND	18.2	16	88		14	77		40-140	13		20
Hexachloroethane	ND	18.2	11	61		10	55		40-140	10		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 QC Batch ID: WG1485070-4 WG1485070-5 QC Sample: L2117259-14 Client ID: MW-S17-04062021

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	89		82		15-110
2-Fluorobiphenyl	81		74		30-130
2-Fluorophenol	68		64		15-110
4-Terphenyl-d14	92		83		30-130
Nitrobenzene-d5	81		75		30-130
Phenol-d6	63		61		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 QC Batch ID: WG1485070-6 WG1485070-7 QC Sample: L2117259-17 Client ID: MW-S28-04062021												
Acenaphthene	ND	18.2	15	83		13	72		40-140	14		20
2-Chloronaphthalene	ND	18.2	14	77		12	66		40-140	15		20
Fluoranthene	0.13	18.2	18	98		17	93		40-140	6		20
Hexachlorobutadiene	ND	18.2	11	61		9.7	53		40-140	13		20
Naphthalene	ND	18.2	13	72		11	61		40-140	17		20
Benzo(a)anthracene	0.09J	18.2	16	88		16	88		40-140	0		20
Benzo(a)pyrene	0.06J	18.2	18	99		17	94		40-140	6		20
Benzo(b)fluoranthene	0.10	18.2	18	99		17	94		40-140	6		20
Benzo(k)fluoranthene	0.04J	18.2	18	99		17	94		40-140	6		20
Chrysene	0.07J	18.2	16	88		15	83		40-140	6		20
Acenaphthylene	ND	18.2	15	83		13	72		40-140	14		20
Anthracene	ND	18.2	17	94		15	83		40-140	13		20
Benzo(ghi)perylene	0.05J	18.2	17	94		16	88		40-140	6		20
Fluorene	ND	18.2	16	88		14	77		40-140	13		20
Phenanthrene	0.06J	18.2	16	88		14	77		40-140	13		20
Dibenzo(a,h)anthracene	0.01J	18.2	18	99		17	94		40-140	6		20
Indeno(1,2,3-cd)pyrene	0.06J	18.2	18	99		17	94		40-140	6		20
Pyrene	0.12	18.2	17	93		16	87		40-140	6		20
2-Methylnaphthalene	ND	18.2	14	77		12	66		40-140	15		20
Pentachlorophenol	ND	18.2	16	88		13	72		30-130	**21**	Q	20
Hexachlorobenzene	ND	18.2	16	88		14	77		40-140	13		20
Hexachloroethane	ND	18.2	11	61		9.4	52		40-140	16		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 08-09,11-14,16-20,22-27,29-30 QC Batch ID: WG1485070-6 WG1485070-7 QC Sample: L2117259-17 Client ID: MW-S28-04062021

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	92		85		15-110
2-Fluorobiphenyl	80		69		30-130
2-Fluorophenol	67		54		15-110
4-Terphenyl-d14	92		89		30-130
Nitrobenzene-d5	80		65		30-130
Phenol-d6	61		50		15-110

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: DUP Sample						
Perfluorobutanoic Acid (PFBA)	ND	ND	ng/l	NC		30
Perfluoropentanoic Acid (PFPeA)	ND	ND	ng/l	NC		30
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/l	NC		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	ng/l	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/l	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	0.914JF	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: DUP Sample						
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	ND	ng/l	NC		30
Perfluorooctadecanoic Acid (PFODA)	ND	ND	ng/l	NC		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
PFOA/PFOS, Total	ND	ND	ng/l	NC		30
PFAS, Total (5)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	79		84		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**61**	Q	68		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91		92		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	143	Q	122		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	72		75		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	87		87		60-129

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: DUP Sample

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	114		115		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	89		91		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**198**	Q	**184**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	74		78		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		96		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	80		91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**200**	Q	**187**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	62		73		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		90		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	85		89		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	99		105		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	99		114		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	75		76		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	67		72		10-206

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,21,27-28 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: DUP Sample						
Perfluorooctanesulfonamide (FOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		70		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	36		35		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	28		29		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	48		50		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	44		45		10-187

INORGANICS
&
MISCELLANEOUS

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-01	Date Collected:	04/05/21 16:45
Client ID:	HA20-CMT3T(OW)-04052021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	68.1		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	1.3		mg/l	0.050	0.014	1	-	04/07/21 06:01	44,353.2	MR
Nitrogen, Nitrate	190		mg/l	5.0	1.1	50	-	04/07/21 08:05	44,353.2	MR
Phosphorus, Total	0.231		mg/l	0.020	0.008	2	04/13/21 10:45	04/14/21 09:39	121,4500P-E	SD
Phosphorus, Orthophosphate	0.010		mg/l	0.005	0.001	1	-	04/07/21 07:48	121,4500P-E	AW
Dissolved Organic Carbon	1.9		mg/l	1.0	0.04	1	-	04/15/21 07:45	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	33.4		mg/l	0.500	0.083	1	-	04/12/21 18:57	44,300.0	AT
Fluoride	0.146		mg/l	0.050	0.037	1	-	04/12/21 18:57	44,300.0	AT
Sulfate	78.0		mg/l	50.0	22.7	50	-	04/12/21 21:43	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-02
Client ID: GZW-9-2-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 16:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:18	44,353.2	MR
Nitrogen, Nitrate	0.068	J	mg/l	0.10	0.023	1	-	04/07/21 06:18	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-03 Date Collected: 04/05/21 17:00
Client ID: MW-S15-04052021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:19	44,353.2	MR
Nitrogen, Nitrate	0.046	J	mg/l	0.10	0.023	1	-	04/07/21 06:19	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-04
Client ID: MW-S60-04052021
Sample Location: CONCORD, MA

Date Collected: 04/05/21 17:25
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	20.2		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:21	44,353.2	MR
Nitrogen, Nitrate	2.1		mg/l	0.10	0.023	1	-	04/07/21 06:21	44,353.2	MR
Phosphorus, Total	0.017		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:42	121,4500P-E	SD
Phosphorus, Orthophosphate	0.007		mg/l	0.005	0.001	1	-	04/07/21 07:48	121,4500P-E	AW
Dissolved Organic Carbon	0.64	J	mg/l	1.0	0.04	1	-	04/15/21 08:14	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	70.2		mg/l	5.00	0.839	10	-	04/12/21 22:04	44,300.0	AT
Fluoride	0.052		mg/l	0.050	0.037	1	-	04/12/21 21:53	44,300.0	AT
Sulfate	17.0		mg/l	1.00	0.454	1	-	04/12/21 21:53	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-05 Date Collected: 04/06/21 09:00
Client ID: EQ BLANK1-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:22	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/07/21 06:22	44,353.2	MR
Phosphorus, Total	0.005	J	mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:43	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:47	121,4500P-E	AS
Dissolved Organic Carbon	0.17	J	mg/l	1.0	0.04	1	-	04/15/21 08:38	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	0.293	J	mg/l	0.500	0.083	1	-	04/12/21 20:03	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/12/21 20:03	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/12/21 20:03	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-07
Client ID: MW-S29-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 09:45
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:23	44,353.2	MR
Nitrogen, Nitrate	0.62		mg/l	0.10	0.023	1	-	04/07/21 06:23	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-08
Client ID: HA20-CMT-6(OW)-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 10:25
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	76.4		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:25	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/07/21 06:25	44,353.2	MR
Phosphorus, Total	0.025		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:47	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:47	121,4500P-E	AS
Dissolved Organic Carbon	0.58	J	mg/l	1.0	0.04	1	-	04/15/21 09:06	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	63.8		mg/l	5.00	0.839	10	-	04/12/21 23:10	44,300.0	AT
Fluoride	0.070		mg/l	0.050	0.037	1	-	04/12/21 19:19	44,300.0	AT
Sulfate	36.7		mg/l	1.00	0.454	1	-	04/12/21 19:19	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-09 Date Collected: 04/06/21 10:40
Client ID: MW-8A-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	20.7		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:30	44,353.2	MR
Nitrogen, Nitrate	2.0		mg/l	0.10	0.023	1	-	04/07/21 06:30	44,353.2	MR
Phosphorus, Total	0.021		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:48	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:48	121,4500P-E	AS
Dissolved Organic Carbon	0.49	J	mg/l	1.0	0.04	1	-	04/15/21 09:34	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	67.4		mg/l	5.00	0.839	10	-	04/12/21 23:21	44,300.0	AT
Fluoride	0.062		mg/l	0.050	0.037	1	-	04/12/21 19:30	44,300.0	AT
Sulfate	15.5		mg/l	1.00	0.454	1	-	04/12/21 19:30	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-10
Client ID: MW-BS36-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 10:40
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.040	J	mg/l	0.050	0.014	1	-	04/07/21 06:31	44,353.2	MR
Nitrogen, Nitrate	0.19		mg/l	0.10	0.023	1	-	04/07/21 06:31	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-11
Client ID: HA20-CMT-5(OW)-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 10:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	70.0		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	0.026	J	mg/l	0.050	0.014	1	-	04/07/21 06:32	44,353.2	MR
Nitrogen, Nitrate	0.066	J	mg/l	0.10	0.023	1	-	04/07/21 06:32	44,353.2	MR
Phosphorus, Total	0.022		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:49	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:48	121,4500P-E	AS
Dissolved Organic Carbon	0.57	J	mg/l	1.0	0.04	1	-	04/15/21 10:02	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	60.2		mg/l	5.00	0.839	10	-	04/12/21 23:32	44,300.0	AT
Fluoride	0.079		mg/l	0.050	0.037	1	-	04/12/21 19:41	44,300.0	AT
Sulfate	35.2		mg/l	1.00	0.454	1	-	04/12/21 19:41	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-12
Client ID: HA20-CMT-5(OW)-04062021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/06/21 11:15
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	68.5		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	0.026	J	mg/l	0.050	0.014	1	-	04/07/21 06:34	44,353.2	MR
Nitrogen, Nitrate	0.065	J	mg/l	0.10	0.023	1	-	04/07/21 06:34	44,353.2	MR
Phosphorus, Total	0.019		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:50	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:49	121,4500P-E	AS
Dissolved Organic Carbon	0.58	J	mg/l	1.0	0.04	1	-	04/15/21 10:30	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	59.9		mg/l	5.00	0.839	10	-	04/12/21 23:43	44,300.0	AT
Fluoride	0.066		mg/l	0.050	0.037	1	-	04/12/21 19:52	44,300.0	AT
Sulfate	35.3		mg/l	1.00	0.454	1	-	04/12/21 19:52	44,300.0	AT

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-13
Client ID: MW-BS31-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 10:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:35	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/07/21 06:35	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	70.7		mg/l	5.00	0.839	10	-	05/05/21 15:07	44,300.0	JT
Fluoride	0.084		mg/l	0.050	0.037	1	-	05/04/21 12:18	44,300.0	JT
Sulfate	46.8		mg/l	1.00	0.454	1	-	05/04/21 12:18	44,300.0	JT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-14
Client ID: MW-S17-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 11:35
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:36	44,353.2	MR
Nitrogen, Nitrate	2.6		mg/l	0.10	0.023	1	-	04/07/21 06:36	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-15 Date Collected: 04/06/21 09:45
Client ID: MW-BS22-04062021 Date Received: 04/06/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:46	44,353.2	MR
Nitrogen, Nitrate	2.5		mg/l	0.10	0.023	1	-	04/07/21 06:46	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-16
Client ID: MW-S22-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 12:10
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:48	44,353.2	MR
Nitrogen, Nitrate	0.55		mg/l	0.10	0.023	1	-	04/07/21 06:48	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-17
Client ID: MW-S28-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 12:45
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:49	44,353.2	MR
Nitrogen, Nitrate	0.53		mg/l	0.10	0.023	1	-	04/07/21 06:49	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-18
Client ID: MW-BS50-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:05
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.015	J	mg/l	0.050	0.014	1	-	04/07/21 06:55	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/07/21 06:55	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	10.1		mg/l	0.500	0.083	1	-	05/04/21 12:30	44,300.0	JT
Fluoride	0.180		mg/l	0.050	0.037	1	-	05/04/21 12:30	44,300.0	JT
Sulfate	19.5		mg/l	1.00	0.454	1	-	05/04/21 12:30	44,300.0	JT

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-19
Client ID: HB-620-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:50
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:57	44,353.2	MR
Nitrogen, Nitrate	2.4		mg/l	0.10	0.023	1	-	04/07/21 06:57	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-20
Client ID: HB-12-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 14:10
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	27.0		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 06:58	44,353.2	MR
Nitrogen, Nitrate	2.7		mg/l	0.10	0.023	1	-	04/07/21 06:58	44,353.2	MR
Phosphorus, Total	0.013		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:51	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:49	121,4500P-E	AS
Dissolved Organic Carbon	0.75	J	mg/l	1.0	0.04	1	-	04/19/21 09:10	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	35.6		mg/l	0.500	0.083	1	-	04/12/21 20:37	44,300.0	AT
Fluoride	0.061		mg/l	0.050	0.037	1	-	04/12/21 20:37	44,300.0	AT
Sulfate	24.3		mg/l	1.00	0.454	1	-	04/12/21 20:37	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2117259
Project Number: 3252H **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-22
Client ID: MW-S39-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 13:10
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 07:03	44,353.2	MR
Nitrogen, Nitrate	0.71		mg/l	0.10	0.023	1	-	04/07/21 07:03	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-23
Client ID: MW-S39-04062021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/06/21 13:15
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 07:04	44,353.2	MR
Nitrogen, Nitrate	0.71		mg/l	0.10	0.023	1	-	04/07/21 07:04	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2117259
Project Number: 3252H
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-24
Client ID: MW-SD39-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 15:00
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.020	J	mg/l	0.050	0.014	1	-	04/07/21 07:06	44,353.2	MR
Nitrogen, Nitrate	0.27		mg/l	0.10	0.023	1	-	04/07/21 07:06	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-25
Client ID: MW-SD17-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 15:25
Date Received: 04/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 07:07	44,353.2	MR
Nitrogen, Nitrate	2.3		mg/l	0.10	0.023	1	-	04/07/21 07:07	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-26
Client ID: MW-SD61-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 14:45
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	18.1		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 07:08	44,353.2	MR
Nitrogen, Nitrate	1.3		mg/l	0.10	0.023	1	-	04/07/21 07:08	44,353.2	MR
Phosphorus, Total	0.014		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:52	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:49	121,4500P-E	AS
Dissolved Organic Carbon	0.54	J	mg/l	1.0	0.04	1	-	04/15/21 15:33	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	68.7		mg/l	5.00	0.839	10	-	04/13/21 00:15	44,300.0	AT
Fluoride	0.044	J	mg/l	0.050	0.037	1	-	04/12/21 20:48	44,300.0	AT
Sulfate	18.0		mg/l	1.00	0.454	1	-	04/12/21 20:48	44,300.0	AT

Project Name: NUCLEAR METALS | **Lab Number:** L2117259
Project Number: 3252H | **Report Date:** 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-27
Client ID: MW-S12-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 15:30
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	8.50		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 07:10	44,353.2	MR
Nitrogen, Nitrate	0.27		mg/l	0.10	0.023	1	-	04/07/21 07:10	44,353.2	MR
Phosphorus, Total	0.013		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:54	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:50	121,4500P-E	AS
Dissolved Organic Carbon	0.52	J	mg/l	1.0	0.04	1	-	04/15/21 15:58	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	15.7		mg/l	0.500	0.083	1	-	04/12/21 20:59	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/12/21 20:59	44,300.0	AT
Sulfate	8.67		mg/l	1.00	0.454	1	-	04/12/21 20:59	44,300.0	AT

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117259
Project Number:	3252H	**Report Date:**	05/05/21

SAMPLE RESULTS

Lab ID:	L2117259-29	Date Collected:	04/06/21 16:05
Client ID:	OW-2-04062021	Date Received:	04/06/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 07:11	44,353.2	MR
Nitrogen, Nitrate	19.		mg/l	0.50	0.11	5	-	04/07/21 08:17	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

SAMPLE RESULTS

Lab ID: L2117259-30
Client ID: MW-S24-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 16:40
Date Received: 04/06/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	33.1		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 07:12	44,353.2	MR
Nitrogen, Nitrate	3.1		mg/l	0.10	0.023	1	-	04/07/21 08:18	44,353.2	MR
Phosphorus, Total	0.023		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:55	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:50	121,4500P-E	AS
Dissolved Organic Carbon	1.1		mg/l	1.0	0.04	1	-	04/15/21 16:26	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	43.2		mg/l	0.500	0.083	1	-	04/12/21 21:10	44,300.0	AT
Fluoride	0.067		mg/l	0.050	0.037	1	-	04/12/21 21:10	44,300.0	AT
Sulfate	52.6		mg/l	1.00	0.454	1	-	04/12/21 21:10	44,300.0	AT

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-05,07-11 Batch: WG1483190-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 05:21	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-05,07-11 Batch: WG1483191-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/07/21 05:19	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 12-20,22 Batch: WG1483192-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 05:27	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 12-20,22 Batch: WG1483193-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/07/21 05:24	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 23-27,29-30 Batch: WG1483194-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/07/21 05:27	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 23-27,29-30 Batch: WG1483195-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/07/21 05:24	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01,04 Batch: WG1483275-1										
Phosphorus, Orthophosphate	0.002	J	mg/l	0.005	0.001	1	-	04/07/21 07:47	121,4500P-E	AW
General Chemistry - Westborough Lab for sample(s): 05,08-09,11-12,20,26-27,30 Batch: WG1483636-1										
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/07/21 22:46	121,4500P-E	AS
Anions by Ion Chromatography - Westborough Lab for sample(s): 01,04-05,08-09,11-12 Batch: WG1485395-1										
Chloride	0.093	J	mg/l	0.500	0.083	1	-	04/12/21 16:35	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/12/21 16:35	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/12/21 16:35	44,300.0	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 20,26-27,30 Batch: WG1485396-1										
Chloride	0.093	J	mg/l	0.500	0.083	1	-	04/12/21 16:35	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/12/21 16:35	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/12/21 16:35	44,300.0	AT
General Chemistry - Westborough Lab for sample(s): 01,04-05,08-09,11-12,20,26-27,30 Batch: WG1485510-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/13/21 10:45	04/14/21 09:37	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01,04-05,08-09,11-12 Batch: WG1486448-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	04/15/21 06:48	1,9060A	DW
General Chemistry - Westborough Lab for sample(s): 30 Batch: WG1486449-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	04/15/21 06:48	1,9060A	DW

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01,04-05,08-09,11-12,20,26-27,30 Batch: WG1486666-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01,04-05,08-09,11-12,20,26-27,30 Batch: WG1486668-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 20 Batch: WG1486943-1										
Dissolved Organic Carbon	0.05	J	mg/l	1.0	0.04	1	-	04/19/21 07:15	1,9060A	DW
General Chemistry - Westborough Lab for sample(s): 26-27 Batch: WG1487025-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	04/15/21 06:48	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 13,18 Batch: WG1494273-1										
Chloride	0.406	J	mg/l	0.500	0.083	1	-	05/04/21 19:21	44,300.0	JT
Fluoride	ND		mg/l	0.050	0.037	1	-	05/04/21 19:21	44,300.0	JT
Sulfate	0.504	J	mg/l	1.00	0.454	1	-	05/04/21 19:21	44,300.0	JT

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05,07-11 Batch: WG1483190-2								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-05,07-11 Batch: WG1483191-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 12-20,22 Batch: WG1483192-2								
Nitrogen, Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 12-20,22 Batch: WG1483193-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 23-27,29-30 Batch: WG1483194-2								
Nitrogen, Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 23-27,29-30 Batch: WG1483195-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,04 Batch: WG1483275-2								
Phosphorus, Orthophosphate	92		-		90-110	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 05,08-09,11-12,20,26-27,30 Batch: WG1483636-2					
Phosphorus, Orthophosphate	99	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,04-05,08-09,11-12 Batch: WG1485395-2					
Chloride	101	-	90-110	-	
Fluoride	99	-	90-110	-	
Sulfate	100	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 20,26-27,30 Batch: WG1485396-2					
Chloride	101	-	90-110	-	
Fluoride	99	-	90-110	-	
Sulfate	100	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01,04-05,08-09,11-12,20,26-27,30 Batch: WG1485510-2					
Phosphorus, Total	101	-	80-120	-	
General Chemistry - Westborough Lab Associated sample(s): 01,04-05,08-09,11-12 Batch: WG1486448-2					
Dissolved Organic Carbon	102	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 30 Batch: WG1486449-2					
Dissolved Organic Carbon	102	-	90-110	-	

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 20 Batch: WG1486943-2					
Dissolved Organic Carbon	98	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 26-27 Batch: WG1487025-2					
Dissolved Organic Carbon	102	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 13,18 Batch: WG1494273-2					
Chloride	104	-	90-110	-	
Fluoride	92	-	90-110	-	
Sulfate	101	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05,07-11 QC Batch ID: WG1483190-4 QC Sample: L2117259-01 Client ID: HA20-CMT3T(OW)-04052021												
Nitrogen, Nitrite	1.3	4	6.0	118		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-05,07-11 QC Batch ID: WG1483191-4 QC Sample: L2117259-01 Client ID: HA20-CMT3T(OW)-04052021												
Nitrogen, Nitrate	190	4	190	**0**	Q	-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 12-20,22 QC Batch ID: WG1483192-4 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
Nitrogen, Nitrite	ND	4	4.8	120		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 12-20,22 QC Batch ID: WG1483193-4 QC Sample: L2117259-14 Client ID: MW-S17-04062021												
Nitrogen, Nitrate	2.6	4	6.5	98		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 12-20,22 QC Batch ID: WG1483193-6 QC Sample: L2117259-17 Client ID: MW-S28-04062021												
Nitrogen, Nitrate	0.53	4	4.5	99		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01,04 QC Batch ID: WG1483275-4 QC Sample: L2117259-04 Client ID: MW-S60-04052021												
Phosphorus, Orthophosphate	0.007	0.5	0.497	98		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 05,08-09,11-12,20,26-27,30 QC Batch ID: WG1483636-4 QC Sample: L2117259-30 Client ID: MW-S24-04062021												
Phosphorus, Orthophosphate	ND	0.5	0.501	100		-	-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 20,26-27,30 QC Batch ID: WG1485396-3 QC Sample: L2117259-20 Client ID: HB-12-04062021										
Chloride	35.6	4	38.4	**70**	Q	-	-	90-110	-	18
Fluoride	0.061	0.4	0.445	96		-	-	90-110	-	15
Sulfate	24.3	8	31.4	**89**	Q	-	-	90-110	-	20
General Chemistry - Westborough Lab Associated sample(s): 01,04-05,08-09,11-12,20,26-27,30 QC Batch ID: WG1485510-3 QC Sample: L2117259-01 Client ID: HA20-CMT3T(OW)-04052021										
Phosphorus, Total	0.231	1	1.21	98		-	-	75-125	-	20
General Chemistry - Westborough Lab Associated sample(s): 01,04-05,08-09,11-12 QC Batch ID: WG1486448-4 QC Sample: L2117259-04 Client ID: MW-S60-04052021										
Dissolved Organic Carbon	0.64J	4	5.3	**132**	Q	-	-	80-120	-	20
General Chemistry - Westborough Lab Associated sample(s): 26-27 QC Batch ID: WG1487025-4 QC Sample: L2117259-27 Client ID: MW-S12-04062021										
Dissolved Organic Carbon	0.52J	4	4.6	115		-	-	80-120	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 13,18 QC Batch ID: WG1494273-4 QC Sample: L2117259-18 Client ID: MW-BS50-04062021										
Chloride	10.1	4	14.1	102		-	-	90-110	-	18
Fluoride	0.180	0.4	0.502	**81**	Q	-	-	90-110	-	15
Sulfate	19.5	8	26.8	91		-	-	90-110	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05,07-11 QC Batch ID: WG1483190-3 QC Sample: L2117259-01 Client ID: HA20-CMT3T(OW)-04052021						
Nitrogen, Nitrite	1.3	1.3	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-05,07-11 QC Batch ID: WG1483191-3 QC Sample: L2117259-01 Client ID: HA20-CMT3T(OW)-04052021						
Nitrogen, Nitrate	190	190	mg/l	0		6
General Chemistry - Westborough Lab Associated sample(s): 12-20,22 QC Batch ID: WG1483192-3 QC Sample: L2117259-14 Client ID: MW-S17-04062021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 12-20,22 QC Batch ID: WG1483193-3 QC Sample: L2117259-14 Client ID: MW-S17-04062021						
Nitrogen, Nitrate	2.6	2.6	mg/l	0		6
General Chemistry - Westborough Lab Associated sample(s): 12-20,22 QC Batch ID: WG1483193-5 QC Sample: L2117259-17 Client ID: MW-S28-04062021						
Nitrogen, Nitrate	0.53	0.52	mg/l	2		6
General Chemistry - Westborough Lab Associated sample(s): 01,04 QC Batch ID: WG1483275-3 QC Sample: L2117259-04 Client ID: MW-S60-04052021						
Phosphorus, Orthophosphate	0.007	0.007	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 05,08-09,11-12,20,26-27,30 QC Batch ID: WG1483636-3 QC Sample: L2117259-08 Client ID: HA20-CMT-6(OW)-04062021						
Phosphorus, Orthophosphate	ND	ND	mg/l	NC		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 20,26-27,30 QC Batch ID: WG1485396-4 QC Sample: L2117259-20 Client ID: HB-12-04062021					
Chloride	35.6	35.9	mg/l	1	18
Fluoride	0.061	0.055	mg/l	11	15
Sulfate	24.3	24.4	mg/l	0	20
General Chemistry - Westborough Lab Associated sample(s): 01,04-05,08-09,11-12,20,26-27,30 QC Batch ID: WG1485510-4 QC Sample: L2117259-01 Client ID: HA20-CMT3T(OW)-04052021					
Phosphorus, Total	0.231	0.220	mg/l	5	20
General Chemistry - Westborough Lab Associated sample(s): 01,04-05,08-09,11-12 QC Batch ID: WG1486448-3 QC Sample: L2117259-01 Client ID: HA20-CMT3T(OW)-04052021					
Dissolved Organic Carbon	1.9	1.9	mg/l	0	20
General Chemistry - Westborough Lab Associated sample(s): 26-27 QC Batch ID: WG1487025-3 QC Sample: L2117259-26 Client ID: MW-SD61-04062021					
Dissolved Organic Carbon	0.54J	0.50J	mg/l	NC	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 13,18 QC Batch ID: WG1494273-3 QC Sample: L2117259-18 Client ID: MW-BS50-04062021					
Chloride	10.1	10.1	mg/l	0	18
Fluoride	0.180	0.176	mg/l	2	15
Sulfate	19.5	19.6	mg/l	1	20

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent
E	Absent
F	Absent
G	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-01A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-01B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-01C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-01D	Vial H2SO4 preserved	D	NA		5.6	Y	Absent		DOC-9060(28)
L2117259-01E	Vial H2SO4 preserved	D	NA		5.6	Y	Absent		DOC-9060(28)
L2117259-01F	Vial H2SO4 preserved	D	NA		5.6	Y	Absent		DOC-9060(28)
L2117259-01G	Plastic 250ml unpreserved/No Headspace	D	NA		5.6	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-01H	Plastic 250ml H2SO4 preserved	D	<2	<2	5.6	Y	Absent		TPHOS-4500(28)
L2117259-01I	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-01J	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-01K	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-01L	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-01M	Plastic 500ml unpreserved	D	7	7	5.6	Y	Absent		OPHOS-4500(2),SO4-300(28),HOLD-WETCHEM(),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2117259-02A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-02B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-02C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-02D	Plastic 120ml unpreserved	D	7	7	5.6	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-02E	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-02F	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-02G	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-02H	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-03A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-03B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-03C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-03D	Plastic 120ml unpreserved	D	7	7	5.6	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-03E	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-03F	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-03G	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-03H	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-03I	Plastic 250ml unpreserved	G	NA		4.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2117259-03J	Plastic 250ml unpreserved	G	NA		4.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2117259-04A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-04B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-04C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-04D	Vial H2SO4 preserved	D	NA		5.6	Y	Absent		DOC-9060(28)
L2117259-04E	Vial H2SO4 preserved	D	NA		5.6	Y	Absent		DOC-9060(28)
L2117259-04F	Vial H2SO4 preserved	D	NA		5.6	Y	Absent		DOC-9060(28)
L2117259-04G	Plastic 250ml unpreserved/No Headspace	D	NA		5.6	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-04H	Plastic 250ml H2SO4 preserved	D	<2	<2	5.6	Y	Absent		TPHOS-4500(28)
L2117259-04I	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-04J	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-04K	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-04L	Amber 250ml unpreserved	D	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-04M	Plastic 500ml unpreserved	D	7	7	5.6	Y	Absent		OPHOS-4500(2),SO4-300(28),HOLD-WETCHEM(),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2117259-05A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-05B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-05C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-05D	Vial H2SO4 preserved	B	NA		4.4	Y	Absent		DOC-9060(28)
L2117259-05E	Vial H2SO4 preserved	B	NA		4.4	Y	Absent		DOC-9060(28)
L2117259-05F	Vial H2SO4 preserved	B	NA		4.4	Y	Absent		DOC-9060(28)
L2117259-05G	Plastic 120ml unpreserved	B	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-05H	Plastic 250ml unpreserved/No Headspace	B	NA		4.4	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-05I	Plastic 250ml unpreserved	B	7	7	4.4	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),HOLD-WETCHEM(),CL-300(28)
L2117259-05J	Plastic 250ml H2SO4 preserved	B	<2	<2	4.4	Y	Absent		TPHOS-4500(28)
L2117259-05K	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-05L	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-05M	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-05N	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-06A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-06B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-07A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-07B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-07C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-07D	Plastic 120ml unpreserved	B	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-07E	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-07F	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-07G	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-07H	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-08A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-08B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-08C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-08D	Vial H2SO4 preserved	B	NA		4.4	Y	Absent		DOC-9060(28)
L2117259-08E	Vial H2SO4 preserved	B	NA		4.4	Y	Absent		DOC-9060(28)
L2117259-08F	Vial H2SO4 preserved	B	NA		4.4	Y	Absent		DOC-9060(28)
L2117259-08G	Plastic 250ml unpreserved/No Headspace	B	NA		4.4	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-08H	Plastic 250ml H2SO4 preserved	B	<2	<2	4.4	Y	Absent		TPHOS-4500(28)
L2117259-08I	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-08J	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-08K	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-08L	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-08M	Plastic 500ml unpreserved	B	7	7	4.4	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),HOLD-WETCHEM(),NO2-353(2),NO3-353(2)
L2117259-09A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-09B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-09C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-09D	Vial H2SO4 preserved	C	NA		2.7	Y	Absent		DOC-9060(28)
L2117259-09E	Vial H2SO4 preserved	C	NA		2.7	Y	Absent		DOC-9060(28)
L2117259-09F	Vial H2SO4 preserved	C	NA		2.7	Y	Absent		DOC-9060(28)
L2117259-09G	Plastic 250ml unpreserved/No Headspace	C	NA		2.7	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-09H	Plastic 250ml H2SO4 preserved	C	<2	<2	2.7	Y	Absent		TPHOS-4500(28)
L2117259-09I	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-09J	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-09K	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-09L	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-09M	Plastic 500ml unpreserved	C	7	7	2.7	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),HOLD-WETCHEM(),NO2-353(2),NO3-353(2)
L2117259-10A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-10B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-10C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-10D	Plastic 120ml unpreserved	B	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-10E	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-10F	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-10G	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-10H	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-11A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-11B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-11C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-11D	Vial H2SO4 preserved	C	NA		2.7	Y	Absent		DOC-9060(28)
L2117259-11E	Vial H2SO4 preserved	C	NA		2.7	Y	Absent		DOC-9060(28)
L2117259-11F	Vial H2SO4 preserved	C	NA		2.7	Y	Absent		DOC-9060(28)
L2117259-11G	Plastic 250ml unpreserved/No Headspace	C	NA		2.7	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-11H	Plastic 250ml H2SO4 preserved	C	<2	<2	2.7	Y	Absent		TPHOS-4500(28)
L2117259-11I	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-11J	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-11K	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-11L	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-11M	Plastic 500ml unpreserved	C	7	7	2.7	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),HOLD-WETCHEM(),NO2-353(2),NO3-353(2)
L2117259-12A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-12B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-12C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-12D	Vial H2SO4 preserved	B	NA		4.4	Y	Absent		DOC-9060(28)
L2117259-12E	Vial H2SO4 preserved	B	NA		4.4	Y	Absent		DOC-9060(28)
L2117259-12F	Vial H2SO4 preserved	B	NA		4.4	Y	Absent		DOC-9060(28)
L2117259-12G	Plastic 120ml unpreserved	B	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-12H	Plastic 250ml unpreserved/No Headspace	B	NA		4.4	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-12I	Plastic 250ml unpreserved	B	7	7	4.4	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),HOLD-WETCHEM()

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-12J	Plastic 250ml H2SO4 preserved	B	<2	<2	4.4	Y	Absent		TPHOS-4500(28)
L2117259-12K	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-12L	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-12M	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-12N	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-13A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-13B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-13C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-13D	Plastic 120ml unpreserved	B	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-13E	Plastic 250ml unpreserved	B	7	7	4.4	Y	Absent		SO4-300(28),F-300(28),CL-300(28)
L2117259-13F	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-13G	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-13H	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-13I	Amber 250ml unpreserved	B	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-14A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-14A1	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-14A2	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-14B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-14B1	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-14B2	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-14C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-14C1	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-14C2	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-14D	Plastic 120ml unpreserved	C	7	7	2.7	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-14D1	Plastic 120ml unpreserved	C	7	7	2.7	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-14D2	Plastic 120ml unpreserved	C	7	7	2.7	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-14E	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-14E1	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-14E2	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-14F	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-14F1	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-14F2	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-14G	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-14G1	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-14G2	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-14H	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-14H1	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-14H2	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-15A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-15B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-15C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-15D	Plastic 120ml unpreserved	C	7	7	2.7	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-15E	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-15F	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-15G	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-15H	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-16A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-16B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-16C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-16D	Plastic 120ml unpreserved	C	7	7	2.7	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-16E	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-16F	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-16G	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-16H	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-17A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-17A1	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-17A2	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-17B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-17B1	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-17B2	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-17C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-17C1	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-17C2	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-17D	Plastic 120ml unpreserved	C	7	7	2.7	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-17D1	Plastic 120ml unpreserved	E	7	7	3.6	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-17D2	Plastic 120ml unpreserved	C	7	7	2.7	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-17E	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-17E1	Amber 250ml unpreserved	E	7	7	3.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-17E2	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-17F	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-17F1	Amber 250ml unpreserved	E	7	7	3.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-17F2	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-17G	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-17G1	Amber 250ml unpreserved	E	7	7	3.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-17G2	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-17H	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-17H1	Amber 250ml unpreserved	E	7	7	3.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-17H2	Amber 250ml unpreserved	C	7	7	2.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-18A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-18B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-18C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-18D	Plastic 120ml unpreserved	F	7	7	3.9	Y	Absent		HOLD-WETCHEM(),NO2-353(2),NO3-353(2)
L2117259-18E	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-18F	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-18G	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-18H	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-19A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-19B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-19C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-19D	Plastic 120ml unpreserved	A	7	7	3.3	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-19E	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-19F	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-19G	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-19H	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-20A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-20B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-20C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-20D	Vial H2SO4 preserved	A	NA		3.3	Y	Absent		DOC-9060(28)
L2117259-20E	Vial H2SO4 preserved	A	NA		3.3	Y	Absent		DOC-9060(28)
L2117259-20F	Vial H2SO4 preserved	A	NA		3.3	Y	Absent		DOC-9060(28)
L2117259-20G	Plastic 250ml unpreserved/No Headspace	A	NA		3.3	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-20H	Plastic 250ml H2SO4 preserved	A	<2	<2	3.3	Y	Absent		TPHOS-4500(28)
L2117259-20I	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-20J	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-20K	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-20L	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-20M	Plastic 500ml unpreserved	A	7	7	3.3	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),HOLD-WETCHEM(),CL-300(28),NO2-353(2),NO3-353(2)
L2117259-21A	Plastic 250ml unpreserved	G	NA		4.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2117259-21B	Plastic 250ml unpreserved	G	NA		4.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2117259-22A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-22B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-22C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-22D	Plastic 120ml unpreserved	F	7	7	3.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-22E	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-22F	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-22G	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-22H	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-23A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-23B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-23C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-23D	Plastic 120ml unpreserved	F	7	7	3.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-23E	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-23F	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-23G	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-23H	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-24A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-24B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-24C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-24D	Plastic 120ml unpreserved	F	7	7	3.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-24E	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-24F	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-24G	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-24H	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-25A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-25B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-25C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-25D	Plastic 120ml unpreserved	F	7	7	3.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-25E	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-25F	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117259-25G	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-25H	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-26A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-26B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-26C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-26D	Vial H2SO4 preserved	A	NA		3.3	Y	Absent		DOC-9060(28)
L2117259-26E	Vial H2SO4 preserved	A	NA		3.3	Y	Absent		MCP-8270SIM-10-LVI(7),DOC-9060(28)
L2117259-26F	Vial H2SO4 preserved	A	NA		3.3	Y	Absent		MCP-8270SIM-10-LVI(7),DOC-9060(28)
L2117259-26G	Plastic 250ml unpreserved/No Headspace	A	NA		3.3	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-26H	Plastic 250ml H2SO4 preserved	A	<2	<2	3.3	Y	Absent		TPHOS-4500(28)
L2117259-26I	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		MCP-8270-10-LVI(7)
L2117259-26J	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		MCP-8270-10-LVI(7)
L2117259-26K	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-26L	Amber 250ml unpreserved	A	7	7	3.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-26M	Plastic 500ml unpreserved	A	7	7	3.3	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),HOLD-WETCHEM(),NO2-353(2),NO3-353(2)
L2117259-27A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-27B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-27C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-27D	Vial H2SO4 preserved	F	NA		3.9	Y	Absent		DOC-9060(28)
L2117259-27E	Vial H2SO4 preserved	F	NA		3.9	Y	Absent		DOC-9060(28)
L2117259-27F	Vial H2SO4 preserved	F	NA		3.9	Y	Absent		DOC-9060(28)
L2117259-27G	Plastic 250ml unpreserved/No Headspace	F	NA		3.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-27H	Plastic 250ml H2SO4 preserved	F	<2	<2	3.9	Y	Absent		TPHOS-4500(28)
L2117259-27I	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-27J	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-27K	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-27L	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117259
Report Date: 05/05/21

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2117259-27M	Plastic 500ml unpreserved	F	7	7	3.9	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),HOLD-WETCHEM(),F-300(28),NO2-353(2),NO3-353(2)
L2117259-27N	Plastic 250ml unpreserved	G	NA		4.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2117259-27O	Plastic 250ml unpreserved	G	NA		4.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2117259-28A	Plastic 250ml unpreserved	G	NA		4.8	Y	Absent		A2-537-ISOTOPE-36(14)
L2117259-29A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-29B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-29C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-29D	Plastic 120ml unpreserved	F	7	7	3.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117259-29E	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-29F	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-29G	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-29H	Amber 250ml unpreserved	F	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-30A	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-30B	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-30C	Vial HCl preserved	D	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117259-30D	Vial H2SO4 preserved	E	NA		3.6	Y	Absent		DOC-9060(28)
L2117259-30E	Vial H2SO4 preserved	E	NA		3.6	Y	Absent		DOC-9060(28)
L2117259-30F	Vial H2SO4 preserved	E	NA		3.6	Y	Absent		DOC-9060(28)
L2117259-30G	Plastic 250ml unpreserved/No Headspace	E	NA		3.6	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117259-30H	Plastic 250ml H2SO4 preserved	E	<2	<2	3.6	Y	Absent		TPHOS-4500(28)
L2117259-30I	Amber 250ml unpreserved	E	7	7	3.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-30J	Amber 250ml unpreserved	E	7	7	3.6	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117259-30K	Amber 250ml unpreserved	E	7	7	3.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-30L	Amber 250ml unpreserved	E	7	7	3.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117259-30M	Plastic 500ml unpreserved	E	7	7	3.6	Y	Absent		OPHOS-4500(2),SO4-300(28),HOLD-WETCHEM(),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)

Container Comments

L2117259-03I	Received labelled 'MW-BM15-04052021'
L2117259-03J	Received labelled 'MW-BM15-04052021'

*Values in parentheses indicate holding time in days

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/6/21

ALPHA Job #: L2117259

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
17259-01	HA20-CMT3T(OW)-04052021	4/5/2021	16:45	GW	SRP	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-02	GZW-9-2-04052021	4/5/2021	16:50	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-03	MW-S15-04052021	4/5/2021	17:00	GW	SRB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
-04	MW-S60-04052021	4/5/2021	17:25	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-05	EQ Blank1-04062021	4/6/2021	9:00	EB	NH	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-06	Trip Blank1-04062021	3/30/21	--	TB	NH	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		2
-07	MW-S29-04062021	4/6/2021	9:45	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-08	HA20-CMT-6(OW)-04062021	4/6/2021	10:25	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-09	MW-8A-04062021	4/6/2021	10:40	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-10	MW-BS36-04062021	4/6/2021	10:40	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO. 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/6/21 1715	[signature]	4/6/21 1715
[signature] AAL	4/6/21 1830	[signature]	4/6/21 1830

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF COUSTODY

PAGE 2 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/6/21

ALPHA Job #: L2117259

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
17259-11	HA20-CMT-5(OW)-04062021	4/6/2021	10:45	GW	SRP	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-12	HA20-CMT-5(OW)-04062021DUP	4/6/2021	11:15	GW	SRP	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-13	MW-BS31-04062021	4/6/2021	10:50	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		8
-14	MW-S17-04062021	4/6/2021	11:35	GW	RM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	MS/MSD	24
-15	MW-BS22-04062021	4/6/2021	9:45	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		6
-16	MW-S22-04062021	4/6/2021	12:10	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		6
-17	MW-S28-04062021	4/6/2021	12:45	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	MS/MSD	24
-18	MW-BS50-04062021	4/6/2021	13:05	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		8
-19	HB-620-04062021	4/6/2021	13:50	GW	ELL	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		6
-20	HB-12-04062021	4/6/2021	14:10	GW	SRP	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01 (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/6/21 1715	[signature] AAL	4/6/21 1715
[signature] AAL	4/6/21 1835	[signature]	4/6/21 1830

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF COUSTODY

PAGE 3 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/6/21

ALPHA Job #: L2117259

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
17259-21	EQ Blank2-04062021	4/6/2021	14:00	EB	NH	~~X~~									X			PFAS ONLY	2
-22	MW-S39-04062021	4/6/2021	13:10	GW	FHM	X	X	X	X										8
-23	MW-S39-04062021DUP	4/6/2021	13:15	GW	FHM	X	X	X	X										8
-24	MW-SD39-04062021	4/6/2021	15:00	GW	FHM	X	X	X	X										8
-25	MW-SD17-04062021	4/6/2021	15:25	GW	RM	X	X	X	X										8
-26	MW-SD61-04062021	4/6/2021	14:45	GW	ZM	X	X	X	X	X	X	X	X	X					14
-27	MW-S12-04062021	4/6/2021	15:30	GW	DG/PB	X	X	X	X	X	X	X	X	X	X				16
-28	Field Blank1-04062021	4/6/2021	15:45	GW	DG										X				2
-29	OW-2-04062021	4/6/2021	16:05	GW	DAP	X	X	X	X										8
-30	MW-S24-04062021	4/6/2021	16:40	GW	ELL	X	X	X	X	X	X	X	X	X					14
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/6/21 1715	[signature] AAC	4/6/21 1715
[signature] AAC	4/6/21 1830	[signature]	4/6/21 1830

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117259**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1486971-5**	**Lab File ID**	**: VQ210416B04**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/16/21 05:41**

Client Sample No.	Lab Sample ID	Analysis Date
WG1486971-3LCS	WG1486971-3	04/16/21 04:10
WG1486971-4LCSD	WG1486971-4	04/16/21 04:40
MW-S17-04062021	L2117259-14	04/16/21 09:43
HA20-CMT3T(OW)-04052021	L2117259-01	04/16/21 10:13
GZW-9-2-04052021	L2117259-02	04/16/21 10:43
MW-S15-04052021	L2117259-03	04/16/21 11:13
MW-S60-04052021	L2117259-04	04/16/21 11:44
EQ BLANK1-04062021	L2117259-05	04/16/21 12:14
MW-S29-04062021	L2117259-07	04/16/21 12:44
HA20-CMT-6(OW)-04062021	L2117259-08	04/16/21 13:14
MW-8A-04062021	L2117259-09	04/16/21 13:45
MW-BS36-04062021	L2117259-10	04/16/21 14:15
MW-S17-04062021MS	WG1486971-6	04/16/21 14:45
MW-S17-04062021MSD	WG1486971-7	04/16/21 15:16

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117259**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487356-5**	**Lab File ID**	**: J210416C07**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/16/21 09:02**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487356-3LCS	WG1487356-3	04/16/21 07:40
WG1487356-4LCSD	WG1487356-4	04/16/21 08:21
MW-BS22-04062021	L2117259-15	04/16/21 09:43
MW-S22-04062021	L2117259-16	04/16/21 11:46
MW-BS50-04062021	L2117259-18	04/16/21 12:27
HB-620-04062021	L2117259-19	04/16/21 13:08
HB-12-04062021	L2117259-20	04/16/21 13:50
MW-S39-04062021	L2117259-22	04/16/21 14:31
MW-S39-04062021 DUP	L2117259-23	04/16/21 15:12
MW-SD39-04062021	L2117259-24	04/16/21 15:53
MW-S12-04062021	L2117259-27	04/16/21 17:57

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117259**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487616-5**	**Lab File ID**	**: VQ210417A04**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/17/21 09:10**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487616-3LCS	WG1487616-3	04/17/21 07:39
WG1487616-4LCSD	WG1487616-4	04/17/21 08:10
TRIPBLANK1-04062021	L2117259-06	04/17/21 09:40
MW-S28-04062021	L2117259-17	04/17/21 11:11
HA20-CMT-5(OW)-04062021	L2117259-11	04/17/21 11:41
HA20-CMT-5(OW)-04062021 DUP	L2117259-12	04/17/21 12:11
MW-BS31-04062021	L2117259-13	04/17/21 12:42
OW-2-04062021	L2117259-29	04/17/21 13:12
MW-S24-04062021	L2117259-30	04/17/21 13:42
MW-S28-04062021MS	WG1487616-6	04/17/21 18:14
MW-S28-04062021MSD	WG1487616-7	04/17/21 18:45

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117259**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487775-5**	**Lab File ID**	**: VQ210418A05**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/18/21 04:55**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487775-3LCS	WG1487775-3	04/18/21 03:24
WG1487775-4LCSD	WG1487775-4	04/18/21 03:54
MW-SD17-04062021	L2117259-25	04/18/21 05:55
MW-SD61-04062021	L2117259-26	04/18/21 06:25

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117259**	
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**	
Instrument ID	**: QUIMBY**	**Calibration Date**	**: 04/16/21 04:10**	
Lab File ID	**: VQ210416B01**	**Init. Calib. Date(s)**	**: 04/11/21**	**04/11/21**
Sample No	**: WG1486971-2**	**Init. Calib. Times**	**: 16:44**	**21:47**
Channel	**:**			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	104	0
Dichlorodifluoromethane	0.715	0.627	-	12.3	20	85	0
Chloromethane	1.089	1.013	-	7	20	92	0
Vinyl chloride	0.844	0.786	-	6.9	20	90	0
Bromomethane	0.461	0.374	-	18.9	20	81	0
Chloroethane	0.521	0.475	-	8.8	20	90	0
Trichlorofluoromethane	1.198	1.078	-	10	20	89	0
Ethyl ether	0.275	0.253	-	8	20	94	0
1,1-Dichloroethene	0.654	0.556	-	15	20	85	0
Carbon disulfide	1.842	1.536	-	16.6	20	84	0
Freon-113	0.676	0.579	-	14.3	20	82	0
Methylene chloride	0.709	0.676	-	4.7	20	95	0
Acetone	10	10.248	-	-2.5	20	109	0
trans-1,2-Dichloroethene	0.781	0.71	-	9.1	20	90	0
Methyl acetate	0.359	0.369	-	-2.8	20	108	0
Methyl tert-butyl ether	1.417	1.384	-	2.3	20	101	0
tert-Butyl alcohol	0.032	0.032*	-	0	20	107	0
Diisopropyl ether	2.883	2.919	-	-1.2	20	103	0
1,1-Dichloroethane	1.547	1.475	-	4.7	20	95	0
Halothane	0.653	0.582	-	10.9	20	88	0
Acrylonitrile	0.149	0.154	-	-3.4	20	105	0
Ethyl tert-butyl ether	2.062	2.059	-	0.1	20	102	0
Vinyl acetate	1.554	1.592	-	-2.4	20	105	0
cis-1,2-Dichloroethene	0.828	0.776	-	6.3	20	94	0
2,2-Dichloropropane	1.253	1.273	-	-1.6	20	102	0
Bromochloromethane	0.339	0.323	-	4.7	20	95	0
Cyclohexane	1.756	1.572	-	10.5	20	92	0
Chloroform	1.426	1.345	-	5.7	20	95	0
Ethyl acetate	0.479	0.489	-	-2.1	20	105	0
Carbon tetrachloride	1.277	1.179	-	7.7	20	91	0
Tetrahydrofuran	0.171	0.175	-	-2.3	20	107	0
Dibromofluoromethane	0.291	0.28	-	3.8	20	99	0
1,1,1-Trichloroethane	1.461	1.348	-	7.7	20	92	0
2-Butanone	0.19	0.208	-	-9.5	20	109	0
1,1-Dichloropropene	1.115	1.042	-	6.5	20	94	0
Benzene	3.027	2.868	-	5.3	20	93	0
tert-Amyl methyl ether	1.521	1.498	-	1.5	20	101	0
1,2-Dichloroethane-d4	0.282	0.28	-	0.7	20	108	0
1,2-Dichloroethane	0.858	0.87	-	-1.4	20	103	0
Methyl cyclohexane	1.55	1.403	-	9.5	20	91	0
Trichloroethene	0.896	0.794	-	11.4	20	92	0
Dibromomethane	0.344	0.336	-	2.3	20	97	0
1,2-Dichloropropane	0.753	0.736	-	2.3	20	98	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117259
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/16/21 04:10
Lab File ID	: VQ210416B01	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1486971-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Bromodichloromethane	0.987	0.95	-	3.7	20	97	0
1,4-Dioxane	0.00307	0.00321*	-	-4.6	20	108	0
cis-1,3-Dichloropropene	1.059	1.085	-	-2.5	20	104	0
Chlorobenzene-d5	1	1	-	0	20	94	0
Toluene-d8	1.077	1.119	-	-3.9	20	99	0
Toluene	1.629	1.697	-	-4.2	20	93	0
4-Methyl-2-pentanone	10	9.913	-	0.9	20	106	0
Tetrachloroethene	0.709	0.691	-	2.5	20	88	0
trans-1,3-Dichloropropene	0.736	0.795	-	-8	20	101	0
Ethyl methacrylate	10	9.767	-	2.3	20	102	0
1,1,2-Trichloroethane	0.325	0.344	-	-5.8	20	97	0
Chlorodibromomethane	0.512	0.527	-	-2.9	20	96	0
1,3-Dichloropropane	0.692	0.734	-	-6.1	20	99	0
1,2-Dibromoethane	0.368	0.381	-	-3.5	20	97	0
2-Hexanone	10	10.387	-	-3.9	20	111	0
Chlorobenzene	1.757	1.811	-	-3.1	20	93	0
Ethylbenzene	3.145	3.407	-	-8.3	20	93	0
1,1,1,2-Tetrachloroethane	0.626	0.648	-	-3.5	20	95	0
p/m Xylene	20	18.886	-	5.6	20	89	0
o Xylene	20	19.311	-	3.4	20	91	0
Styrene	20	19.433	-	2.8	20	92	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	91	0
Bromoform	0.517	0.565	-	-9.3	20	95	0
Isopropylbenzene	6.172	6.817	-	-10.5	20	90	0
4-Bromofluorobenzene	0.997	1.065	-	-6.8	20	96	0
Bromobenzene	1.257	1.379	-	-9.7	20	93	0
n-Propylbenzene	6.845	7.236	-	-5.7	20	90	0
1,4-Dichlorobutane	1.486	1.774	-	-19.4	20	103	0
1,1,2,2-Tetrachloroethane	0.764	0.869	-	-13.7	20	97	0
4-Ethyltoluene	5.065	5.146	-	-1.6	20	88	0
2-Chlorotoluene	4.764	5.169	-	-8.5	20	93	0
1,3,5-Trimethylbenzene	3.876	3.978	-	-2.6	20	90	0
1,2,3-Trichloropropane	0.635	0.738	-	-16.2	20	100	0
trans-1,4-Dichloro-2-buten	0.258	0.315	-	-22.1*	20	110	0
4-Chlorotoluene	4.01	4.266	-	-6.4	20	92	0
tert-Butylbenzene	4.263	4.368	-	-2.5	20	87	0
1,2,4-Trimethylbenzene	3.462	3.617	-	-4.5	20	91	0
sec-Butylbenzene	5.424	5.578	-	-2.8	20	87	0
p-Isopropyltoluene	10	9.159	-	8.4	20	88	0
1,3-Dichlorobenzene	2.441	2.584	-	-5.9	20	91	0
1,4-Dichlorobenzene	2.306	2.382	-	-3.3	20	91	0
p-Diethylbenzene	2.449	2.335	-	4.7	20	88	0
n-Butylbenzene	10	9.587	-	4.1	20	90	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2117259
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Instrument ID	: QUIMBY	**Calibration Date**	: 04/16/21 04:10
Lab File ID	: VQ210416B01	**Init. Calib. Date(s)**	: 04/11/21 04/11/21
Sample No	: WG1486971-2	**Init. Calib. Times**	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichlorobenzene	2.108	2.267	-	-7.5	20	92	0
1,2,4,5-Tetramethylbenzene	2.863	3.796	-	-32.6*	20	97	0
1,2-Dibromo-3-chloropropan	0.11	0.113	-	-2.7	20	89	0
1,3,5-Trichlorobenzene	1.16	1.239	-	-6.8	20	93	0
Hexachlorobutadiene	0.787	0.757	-	3.8	20	88	0
1,2,4-Trichlorobenzene	0.939	0.969	-	-3.2	20	96	0
Naphthalene	1.416	1.59	-	-12.3	20	97	0
1,2,3-Trichlorobenzene	0.783	0.873	-	-11.5	20	94	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117259	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/16/21 07:40	
Lab File ID	: J210416C03	Init. Calib. Date(s)	: 04/06/21	04/06/21
Sample No	: WG1487356-2	Init. Calib. Times	: 06:51	15:03
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	83	0
Dichlorodifluoromethane	1.063	0.638	-	40*	20	45	0
Chloromethane	1.777	1.802	-	-1.4	20	73	0
Vinyl chloride	2.131	2.064	-	3.1	20	71	0
Bromomethane	10	9.506	-	4.9	20	71	0
Chloroethane	1.132	1.285	-	-13.5	20	79	0
Trichlorofluoromethane	1.963	1.946	-	0.9	20	75	0
Ethyl ether	0.811	0.827	-	-2	20	79	0
1,1-Dichloroethene	1.225	1.287	-	-5.1	20	80	0
Carbon disulfide	4.134	4.331	-	-4.8	20	79	0
Freon-113	1.249	1.254	-	-0.4	20	77	0
Acrolein	0.195	0.218	-	-11.8	20	85	0
Methylene chloride	1.42	1.614	-	-13.7	20	85	0
Acetone	0.421	0.536	-	-27.3*	20	95	0
trans-1,2-Dichloroethene	1.295	1.369	-	-5.7	20	82	0
Methyl acetate	1.123	1.306	-	-16.3	20	92	0
Methyl tert-butyl ether	3.731	3.648	-	2.2	20	81	0
tert-Butyl alcohol	0.112	0.106	-	5.4	20	84	0
Diisopropyl ether	5.416	6.073	-	-12.1	20	89	0
1,1-Dichloroethane	3.15	3.615	-	-14.8	20	85	0
Halothane	0.935	0.994	-	-6.3	20	82	0
Acrylonitrile	0.54	0.642	-	-18.9	20	88	0
Ethyl tert-butyl ether	4.546	4.737	-	-4.2	20	86	0
Vinyl acetate	3.97	4.038	-	-1.7	20	85	0
cis-1,2-Dichloroethene	1.495	1.592	-	-6.5	20	82	0
2,2-Dichloropropane	2.269	2.461	-	-8.5	20	87	0
Bromochloromethane	0.579	0.636	-	-9.8	20	86	0
Cyclohexane	3.039	3.308	-	-8.9	20	82	0
Chloroform	2.689	2.864	-	-6.5	20	82	0
Ethyl acetate	1.446	1.601	-	-10.7	20	93	0
Carbon tetrachloride	1.62	1.698	-	-4.8	20	81	0
Tetrahydrofuran	0.434	0.52	-	-19.8	20	88	0
Dibromofluoromethane	0.243	0.242	-	0.4	20	85	0
1,1,1-Trichloroethane	2.087	2.257	-	-8.1	20	83	0
2-Butanone	0.63	0.696	-	-10.5	20	91	0
1,1-Dichloropropene	2.06	2.185	-	-6.1	20	82	0
Benzene	6.094	6.509	-	-6.8	20	85	0
tert-Amyl methyl ether	3.752	3.52	-	6.2	20	79	0
1,2-Dichloroethane-d4	0.4	0.4	-	0	20	83	0
1,2-Dichloroethane	2.172	2.411	-	-11	20	85	0
Methyl cyclohexane	2.718	2.724	-	-0.2	20	79	0
Trichloroethene	1.386	1.459	-	-5.3	20	84	0
Dibromomethane	0.835	0.881	-	-5.5	20	84	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117259**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Instrument ID	**: JACK**	**Calibration Date**	**: 04/16/21 07:40**
Lab File ID	**: J210416C03**	**Init. Calib. Date(s)**	**: 04/06/21 04/06/21**
Sample No	**: WG1487356-2**	**Init. Calib. Times**	**: 06:51 15:03**
Channel	**:**		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	1.734	1.895	-	-9.3	20	86	0
2-Chloroethyl vinyl ether	0.93	0.851	-	8.5	20	76	0
Bromodichloromethane	2.051	2.172	-	-5.9	20	84	0
1,4-Dioxane	0.011	0.013*	-	-18.2	20	95	0
cis-1,3-Dichloropropene	2.48	2.656	-	-7.1	20	86	0
Chlorobenzene-d5	1	1	-	0	20	79	0
Toluene-d8	1.295	1.325	-	-2.3	20	78	0
Toluene	4.665	5.015	-	-7.5	20	80	0
4-Methyl-2-pentanone	0.633	0.582	-	8.1	20	77	0
Tetrachloroethene	1.509	1.619	-	-7.3	20	89	0
trans-1,3-Dichloropropene	2.822	3.178	-	-12.6	20	86	0
Ethyl methacrylate	2.319	2.251	-	2.9	20	76	0
1,1,2-Trichloroethane	1.359	1.482	-	-9.1	20	85	0
Chlorodibromomethane	1.446	1.496	-	-3.5	20	85	0
1,3-Dichloropropane	2.89	3.185	-	-10.2	20	86	0
1,2-Dibromoethane	1.36	1.459	-	-7.3	20	87	0
2-Hexanone	1.159	1.186	-	-2.3	20	78	0
Chlorobenzene	4.762	5.099	-	-7.1	20	83	0
Ethylbenzene	9.087	9.941	-	-9.4	20	79	0
1,1,1,2-Tetrachloroethane	1.447	1.555	-	-7.5	20	88	0
p/m Xylene	3.498	3.747	-	-7.1	20	80	0
o Xylene	3.305	3.558	-	-7.7	20	79	0
Styrene	5.661	6.233	-	-10.1	20	80	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	81	0
Bromoform	10	9.253	-	7.5	20	89	0
Isopropylbenzene	17.237	17.42	-	-1.1	20	79	0
4-Bromofluorobenzene	1.006	1.006	-	0	20	82	0
Bromobenzene	3.515	3.351	-	4.7	20	86	0
n-Propylbenzene	23.158	24.304	-	-4.9	20	79	0
1,4-Dichlorobutane	6.223	7.121	-	-14.4	20	87	0
1,1,2,2-Tetrachloroethane	10	10.59	-	-5.9	20	80	0
4-Ethyltoluene	16.64	17.331	-	-4.2	20	80	0
2-Chlorotoluene	15.112	16.047	-	-6.2	20	81	0
1,3,5-Trimethylbenzene	14.217	14.904	-	-4.8	20	82	0
1,2,3-Trichloropropane	3.239	3.32	-	-2.5	20	78	0
trans-1,4-Dichloro-2-buten	1.298	1.415	-	-9	20	78	0
4-Chlorotoluene	13.612	14.306	-	-5.1	20	80	0
tert-Butylbenzene	11.914	12.247	-	-2.8	20	81	0
1,2,4-Trimethylbenzene	13.724	14.043	-	-2.3	20	81	0
sec-Butylbenzene	17.277	18.102	-	-4.8	20	78	0
p-Isopropyltoluene	14.39	15.206	-	-5.7	20	81	0
1,3-Dichlorobenzene	7.305	7.636	-	-4.5	20	85	0
1,4-Dichlorobenzene	7.308	7.604	-	-4.1	20	87	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117259**		
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**		
Instrument ID	**: JACK**	**Calibration Date**	**: 04/16/21 07:40**		
Lab File ID	**: J210416C03**	**Init. Calib. Date(s)**	**: 04/06/21**	**04/06/21**	
Sample No	**: WG1487356-2**	**Init. Calib. Times**	**: 06:51**	**15:03**	
Channel	**:**				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	8.273	8.367	-	-1.1	20	81	0
n-Butylbenzene	14.883	16.079	-	-8	20	82	0
1,2-Dichlorobenzene	6.648	6.803	-	-2.3	20	85	0
1,2,4,5-Tetramethylbenzene	10.716	9.943	-	7.2	20	81	0
1,2-Dibromo-3-chloropropan	0.466	0.431	-	7.5	20	83	0
1,3,5-Trichlorobenzene	4.04	4.043	-	-0.1	20	92	0
Hexachlorobutadiene	10	10.886	-	-8.9	20	94	0
1,2,4-Trichlorobenzene	10	10.047	-	-0.5	20	87	0
Naphthalene	8.515	8.173	-	4	20	83	0
1,2,3-Trichlorobenzene	2.936	2.977	-	-1.4	20	91	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2117259	
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H	
Instrument ID	: QUIMBY	**Calibration Date**	: 04/17/21 07:39	
Lab File ID	: VQ210417A01	**Init. Calib. Date(s)**	: 04/11/21	04/11/21
Sample No	: WG1487616-2	**Init. Calib. Times**	: 16:44	21:47
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	105	0
Dichlorodifluoromethane	0.715	0.53	-	25.9*	20	72	0
Chloromethane	1.089	0.937	-	14	20	86	0
Vinyl chloride	0.844	0.725	-	14.1	20	84	0
Bromomethane	0.461	0.377	-	18.2	20	82	0
Chloroethane	0.521	0.445	-	14.6	20	84	0
Trichlorofluoromethane	1.198	1.003	-	16.3	20	83	0
Ethyl ether	0.275	0.25	-	9.1	20	93	0
1,1-Dichloroethene	0.654	0.517	-	20.9*	20	80	0
Carbon disulfide	1.842	1.481	-	19.6	20	81	0
Freon-113	0.676	0.57	-	15.7	20	81	0
Methylene chloride	0.709	0.649	-	8.5	20	92	0
Acetone	10	9.962	-	0.4	20	106	0
trans-1,2-Dichloroethene	0.781	0.666	-	14.7	20	85	0
Methyl acetate	0.359	0.366	-	-1.9	20	108	0
Methyl tert-butyl ether	1.417	1.362	-	3.9	20	100	0
tert-Butyl alcohol	0.032	0.034*	-	-6.3	20	114	0
Diisopropyl ether	2.883	2.821	-	2.2	20	101	0
1,1-Dichloroethane	1.547	1.401	-	9.4	20	91	0
Halothane	0.653	0.541	-	17.2	20	82	0
Acrylonitrile	0.149	0.156	-	-4.7	20	107	0
Ethyl tert-butyl ether	2.062	1.991	-	3.4	20	99	0
Vinyl acetate	1.554	1.643	-	-5.7	20	109	0
cis-1,2-Dichloroethene	0.828	0.744	-	10.1	20	90	0
2,2-Dichloropropane	1.253	1.194	-	4.7	20	96	0
Bromochloromethane	0.339	0.303	-	10.6	20	89	0
Cyclohexane	1.756	1.494	-	14.9	20	88	0
Chloroform	1.426	1.27	-	10.9	20	90	0
Ethyl acetate	0.479	0.492	-	-2.7	20	107	0
Carbon tetrachloride	1.277	1.133	-	11.3	20	88	0
Tetrahydrofuran	0.171	0.175	-	-2.3	20	108	0
Dibromofluoromethane	0.291	0.272	-	6.5	20	97	0
1,1,1-Trichloroethane	1.461	1.27	-	13.1	20	87	0
2-Butanone	0.19	0.201	-	-5.8	20	107	0
1,1-Dichloropropene	1.115	0.967	-	13.3	20	87	0
Benzene	3.027	2.718	-	10.2	20	89	0
tert-Amyl methyl ether	1.521	1.461	-	3.9	20	100	0
1,2-Dichloroethane-d4	0.282	0.29	-	-2.8	20	112	0
1,2-Dichloroethane	0.858	0.837	-	2.4	20	99	0
Methyl cyclohexane	1.55	1.328	-	14.3	20	87	0
Trichloroethene	0.896	0.764	-	14.7	20	89	0
Dibromomethane	0.344	0.324	-	5.8	20	94	0
1,2-Dichloropropane	0.753	0.703	-	6.6	20	94	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117259
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/17/21 07:39
Lab File ID	: VQ210417A01	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1487616-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Bromodichloromethane	0.987	0.908	-	8	20	93	0
1,4-Dioxane	0.00307	0.00372*	-	-21.2*	20	126	0
cis-1,3-Dichloropropene	1.059	1.005	-	5.1	20	97	0
Chlorobenzene-d5	1	1	-	0	20	84	0
Toluene-d8	1.077	1.179	-	-9.5	20	93	0
Toluene	1.629	1.795	-	-10.2	20	88	0
4-Methyl-2-pentanone	10	10.858	-	-8.6	20	105	0
Tetrachloroethene	0.709	0.717	-	-1.1	20	82	0
trans-1,3-Dichloropropene	0.736	0.882	-	-19.8	20	100	0
Ethyl methacrylate	10	10.703	-	-7	20	101	0
1,1,2-Trichloroethane	0.325	0.374	-	-15.1	20	94	0
Chlorodibromomethane	0.512	0.574	-	-12.1	20	93	0
1,3-Dichloropropane	0.692	0.817	-	-18.1	20	98	0
1,2-Dibromoethane	0.368	0.417	-	-13.3	20	95	0
2-Hexanone	10	11.41	-	-14.1	20	111	0
Chlorobenzene	1.757	1.935	-	-10.1	20	89	0
Ethylbenzene	3.145	3.599	-	-14.4	20	88	0
1,1,1,2-Tetrachloroethane	0.626	0.694	-	-10.9	20	91	0
p/m Xylene	20	19.937	-	0.3	20	84	0
o Xylene	20	20.367	-	-1.8	20	85	0
Styrene	20	20.546	-	-2.7	20	87	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	79	0
Bromoform	0.517	0.662	-	-28*	20	96	0
Isopropylbenzene	6.172	7.362	-	-19.3	20	84	0
4-Bromofluorobenzene	0.997	1.074	-	-7.7	20	84	0
Bromobenzene	1.257	1.521	-	-21*	20	89	0
n-Propylbenzene	6.845	7.782	-	-13.7	20	83	0
1,4-Dichlorobutane	1.486	2.026	-	-36.3*	20	102	0
1,1,2,2-Tetrachloroethane	0.764	1.017	-	-33.1*	20	99	0
4-Ethyltoluene	5.065	5.529	-	-9.2	20	82	0
2-Chlorotoluene	4.764	5.541	-	-16.3	20	86	0
1,3,5-Trimethylbenzene	3.876	4.289	-	-10.7	20	84	0
1,2,3-Trichloropropane	0.635	0.864	-	-36.1*	20	101	0
trans-1,4-Dichloro-2-buten	0.258	0.377	-	-46.1*	20	114	0
4-Chlorotoluene	4.01	4.688	-	-16.9	20	88	0
tert-Butylbenzene	4.263	4.658	-	-9.3	20	80	0
1,2,4-Trimethylbenzene	3.462	3.979	-	-14.9	20	87	0
sec-Butylbenzene	5.424	6.002	-	-10.7	20	82	0
p-Isopropyltoluene	10	9.694	-	3.1	20	80	0
1,3-Dichlorobenzene	2.441	2.814	-	-15.3	20	86	0
1,4-Dichlorobenzene	2.306	2.648	-	-14.8	20	87	0
p-Diethylbenzene	2.449	2.52	-	-2.9	20	83	0
n-Butylbenzene	10	10.435	-	-4.4	20	85	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117259**	
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**	
Instrument ID	**: QUIMBY**	**Calibration Date**	**: 04/17/21 07:39**	
Lab File ID	**: VQ210417A01**	**Init. Calib. Date(s)**	**: 04/11/21**	**04/11/21**
Sample No	**: WG1487616-2**	**Init. Calib. Times**	**: 16:44**	**21:47**
Channel	**:**			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichlorobenzene	2.108	2.516	-	-19.4	20	89	0
1,2,4,5-Tetramethylbenzene	2.863	4.205	-	-46.9*	20	93	0
1,2-Dibromo-3-chloropropan	0.11	0.137	-	-24.5*	20	93	0
1,3,5-Trichlorobenzene	1.16	1.379	-	-18.9	20	90	0
Hexachlorobutadiene	0.787	0.785	-	0.3	20	79	0
1,2,4-Trichlorobenzene	0.939	1.087	-	-15.8	20	93	0
Naphthalene	1.416	1.818	-	-28.4*	20	96	0
1,2,3-Trichlorobenzene	0.783	0.997	-	-27.3*	20	93	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117259**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Instrument ID	**: QUIMBY**	**Calibration Date**	**: 04/18/21 03:24**
Lab File ID	**: VQ210418A02**	**Init. Calib. Date(s)**	**: 04/11/21 04/11/21**
Sample No	**: WG1487775-2**	**Init. Calib. Times**	**: 16:44 21:47**
Channel	**:**		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	107	0
Dichlorodifluoromethane	0.715	0.532	-	25.6*	20	74	0
Chloromethane	1.089	0.893	-	18	20	84	0
Vinyl chloride	0.844	0.699	-	17.2	20	83	0
Bromomethane	0.461	0.312	-	32.3*	20	69	0
Chloroethane	0.521	0.435	-	16.5	20	84	0
Trichlorofluoromethane	1.198	0.968	-	19.2	20	82	0
Ethyl ether	0.275	0.243	-	11.6	20	92	0
1,1-Dichloroethene	0.654	0.472	-	27.8*	20	74	0
Carbon disulfide	1.842	1.364	-	26*	20	76	0
Methylene chloride	0.709	0.596	-	15.9	20	86	0
Acetone	10	9.658	-	3.4	20	106	0
trans-1,2-Dichloroethene	0.781	0.613	-	21.5*	20	80	0
Methyl tert-butyl ether	1.417	1.271	-	10.3	20	96	0
Diisopropyl ether	2.883	2.686	-	6.8	20	98	0
1,1-Dichloroethane	1.547	1.308	-	15.4	20	86	0
Ethyl tert-butyl ether	2.062	1.889	-	8.4	20	96	0
cis-1,2-Dichloroethene	0.828	0.674	-	18.6	20	83	0
2,2-Dichloropropane	1.253	1.13	-	9.8	20	93	0
Bromochloromethane	0.339	0.279	-	17.7	20	84	0
Chloroform	1.426	1.188	-	16.7	20	86	0
Carbon tetrachloride	1.277	1.043	-	18.3	20	83	0
Tetrahydrofuran	0.171	0.165	-	3.5	20	104	0
Dibromofluoromethane	0.291	0.269	-	7.6	20	98	0
1,1,1-Trichloroethane	1.461	1.184	-	19	20	83	0
2-Butanone	0.19	0.19	-	0	20	103	0
1,1-Dichloropropene	1.115	0.916	-	17.8	20	85	0
Benzene	3.027	2.516	-	16.9	20	84	0
tert-Amyl methyl ether	1.521	1.362	-	10.5	20	95	0
1,2-Dichloroethane-d4	0.282	0.292	-	-3.5	20	115	0
1,2-Dichloroethane	0.858	0.798	-	7	20	97	0
Trichloroethene	0.896	0.689	-	23.1*	20	82	0
Dibromomethane	0.344	0.302	-	12.2	20	90	0
1,2-Dichloropropane	0.753	0.647	-	14.1	20	88	0
Bromodichloromethane	0.987	0.85	-	13.9	20	89	0
1,4-Dioxane	0.00307	0.00268*	-	12.7	20	93	0
cis-1,3-Dichloropropene	1.059	0.98	-	7.5	20	97	0
Chlorobenzene-d5	1	1	-	0	20	84	0
Toluene-d8	1.077	1.204	-	-11.8	20	95	0
Toluene	1.629	1.683	-	-3.3	20	83	0
4-Methyl-2-pentanone	10	10.437	-	-4.4	20	101	0
Tetrachloroethene	0.709	0.662	-	6.6	20	76	0
trans-1,3-Dichloropropene	0.736	0.834	-	-13.3	20	95	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117259		
Project Name	: NUCLEAR METALS	Project Number	: 3252H		
Instrument ID	: QUIMBY	Calibration Date	: 04/18/21 03:24		
Lab File ID	: VQ210418A02	Init. Calib. Date(s)	: 04/11/21	04/11/21	
Sample No	: WG1487775-2	Init. Calib. Times	: 16:44	21:47	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.325	0.36	-	-10.8	20	91	0
Chlorodibromomethane	0.512	0.543	-	-6.1	20	88	0
1,3-Dichloropropane	0.692	0.77	-	-11.3	20	93	0
1,2-Dibromoethane	0.368	0.391	-	-6.3	20	89	0
2-Hexanone	10	10.94	-	-9.4	20	106	0
Chlorobenzene	1.757	1.809	-	-3	20	83	0
Ethylbenzene	3.145	3.357	-	-6.7	20	82	0
1,1,1,2-Tetrachloroethane	0.626	0.655	-	-4.6	20	86	0
p/m Xylene	20	18.557	-	7.2	20	78	0
o Xylene	20	19.017	-	4.9	20	80	0
Styrene	20	19.683	-	1.6	20	83	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	79	0
Bromoform	0.517	0.59	-	-14.1	20	86	0
Isopropylbenzene	6.172	6.861	-	-11.2	20	79	0
4-Bromofluorobenzene	0.997	1.099	-	-10.2	20	87	0
Bromobenzene	1.257	1.404	-	-11.7	20	83	0
n-Propylbenzene	6.845	7.35	-	-7.4	20	79	0
1,1,2,2-Tetrachloroethane	0.764	0.961	-	-25.8*	20	94	0
2-Chlorotoluene	4.764	5.301	-	-11.3	20	83	0
1,3,5-Trimethylbenzene	3.876	4.02	-	-3.7	20	79	0
1,2,3-Trichloropropane	0.635	0.809	-	-27.4*	20	96	0
4-Chlorotoluene	4.01	4.46	-	-11.2	20	84	0
tert-Butylbenzene	4.263	4.377	-	-2.7	20	76	0
1,2,4-Trimethylbenzene	3.462	3.728	-	-7.7	20	82	0
sec-Butylbenzene	5.424	5.638	-	-3.9	20	77	0
p-Isopropyltoluene	10	9.199	-	8	20	77	0
1,3-Dichlorobenzene	2.441	2.631	-	-7.8	20	81	0
1,4-Dichlorobenzene	2.306	2.443	-	-5.9	20	81	0
n-Butylbenzene	10	9.885	-	1.2	20	81	0
1,2-Dichlorobenzene	2.108	2.336	-	-10.8	20	83	0
1,2-Dibromo-3-chloropropan	0.11	0.128	-	-16.4	20	87	0
Hexachlorobutadiene	0.787	0.741	-	5.8	20	75	0
1,2,4-Trichlorobenzene	0.939	1.004	-	-6.9	20	87	0
Naphthalene	1.416	1.707	-	-20.6*	20	90	0
1,2,3-Trichlorobenzene	0.783	0.905	-	-15.6	20	85	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L2117504
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	3252H
Report Date:	04/22/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2117504-01	MW-S62A-04062021	WATER	CONCORD, MA	04/06/21 17:20	04/07/21
L2117504-02	TRIP BLANK1-04072021	WATER	CONCORD, MA	03/30/21 00:00	04/07/21
L2117504-03	MW-BS28-04062021	WATER	CONCORD, MA	04/06/21 17:10	04/07/21
L2117504-04	MW-BS17-04072021	WATER	CONCORD, MA	04/07/21 09:30	04/07/21
L2117504-05	MW-SD62A-04072021	WATER	CONCORD, MA	04/07/21 09:30	04/07/21
L2117504-06	HB-11-04072021	WATER	CONCORD, MA	04/07/21 09:55	04/07/21
L2117504-07	HA20-CMT-1S-04072021	WATER	CONCORD, MA	04/07/21 10:20	04/07/21
L2117504-08	MW-BS39-04072021	WATER	CONCORD, MA	04/07/21 11:00	04/07/21
L2117504-09	MW-S14-04072021	WATER	CONCORD, MA	04/07/21 11:00	04/07/21
L2117504-10	MW-SD63-04072021	WATER	CONCORD, MA	04/07/21 11:30	04/07/21
L2117504-11	MW-BS12-04072021	WATER	CONCORD, MA	04/07/21 11:30	04/07/21
L2117504-12	EQBLANK1-04072021	WATER	CONCORD, MA	04/07/21 12:00	04/07/21
L2117504-13	HA20-CMT-11-04072021	WATER	CONCORD, MA	04/07/21 12:45	04/07/21
L2117504-14	MW-SD02-04072021	WATER	CONCORD, MA	04/07/21 13:00	04/07/21
L2117504-15	MW-SM46-04072021	WATER	CONCORD, MA	04/07/21 13:30	04/07/21
L2117504-16	FIELD BLANK1-04072021	WATER	CONCORD, MA	04/07/21 14:00	04/07/21
L2117504-17	MW-S32-04072021	WATER	CONCORD, MA	04/07/21 08:50	04/07/21
L2117504-18	MW-SD32-04072021	WATER	CONCORD, MA	04/07/21 10:50	04/07/21
L2117504-19	MW-BS32-04072021	WATER	CONCORD, MA	04/07/21 14:10	04/07/21
L2117504-20	MW-S63-04072021	WATER	CONCORD, MA	04/07/21 14:15	04/07/21
L2117504-21	MW-BS14-04072021	WATER	CONCORD, MA	04/07/21 13:55	04/07/21
L2117504-22	MW-SD24-04072021	WATER	CONCORD, MA	04/07/21 15:30	04/07/21
L2117504-23	HA-11-04072021	WATER	CONCORD, MA	04/07/21 15:40	04/07/21
L2117504-24	HA20-CMT-1D1-04072021	WATER	CONCORD, MA	04/07/21 16:00	04/07/21

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Volatile Organics

L2117504-10, -12, -13, -14, -17, -19, -21, -22, -23, and -24: Initial calibration utilized a quadratic fit for: n-butylbenzene, p-isopropyltoluene

In reference to question H:

L2117504-07: The surrogate recoveries are above the acceptance criteria for 1,2-dichloroethane-d4 (137%) and dibromofluoromethane (134%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L2117504-08: The surrogate recoveries are above the acceptance criteria for 1,2-dichloroethane-d4 (136%) and dibromofluoromethane (136%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L2117504-09: The surrogate recoveries are above the acceptance criteria for 1,2-dichloroethane-d4 (133%) and dibromofluoromethane (131%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L2117504-11: The surrogate recoveries are above the acceptance criteria for 1,2-dichloroethane-d4 (140%) and dibromofluoromethane (145%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L2117504-15: The surrogate recoveries are above the acceptance criteria for 1,2-dichloroethane-d4 (142%) and dibromofluoromethane (138%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L2117504-18: The surrogate recoveries are above the acceptance criteria for 1,2-dichloroethane-d4 (135%) and dibromofluoromethane (133%). Since the sample was non-detect for all target analytes, re-analysis was not required.

Case Narrative (continued)

The WG1487621-3/-4 LCS/LCSD recoveries, associated with L2117504-09, -11, -15, and -18, are below the individual acceptance criteria for dichlorodifluoromethane (60%/66%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1487632-3/-4 LCS/LCSD recoveries, associated with L2117504-01 through -08, are outside the acceptance criteria for individual target compounds, but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially high bias for 1,4-dioxane (136%/134%) and a potentially low bias for dichlorodifluoromethane (62%/65%).

The WG1487906-3 LCS recoveries, associated with L2117504-10, -12, -13, -14, -17, -19, -21, -22, -23, and -24, are above the individual acceptance criteria for 1,1,2,2-tetrachloroethane (140%) and 1,2,3-trichloropropane (140%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for these compounds.

The WG1487906-3/-4 LCS/LCSD RPD, associated with L2117504-10, -12, -13, -14, -17, -19, -21, -22, -23, and -24, is above the acceptance criteria for 1,4-dioxane (30%).

The WG1487906-6/-7 MS/MSD recoveries, performed on L2117504-23, are above the acceptance criteria for bromomethane (63%/69%); however, the associated LCS/LCSD recoveries are within overall method allowances. The results of the native sample are considered to have a potentially high bias for this compound.

The WG1487906-6/-7 MS/MSD RPD, performed on L2117504-23, is outside the acceptance criteria for 2-hexanone (26%).

L2117504-09, -11, -15, and -18: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0095)

Average Response Factor: 1,4-dioxane

L2117504-01 through -08: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0119)

Average Response Factor: 1,4-dioxane

L2117504-10, -12, -13, -14, -17, -19, -21, -22, -23, and -24: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0025)

Project Name: NUCLEAR METALS **Lab Number:** L2117504
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Case Narrative (continued)

Average Response Factor: 1,4-dioxane

L2117504-20: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0098)

Average Response Factor: 1,4-dioxane

L2117504-01 through -15 and -17 through -24: The associated continuing calibration standards are outside the acceptance criteria for several compounds; however, they are within overall method allowances. Copies of the continuing calibration standards are included as an addendum to this report.

Semivolatile Organics

L2117504-03, -04, -05, -06, -07, -08, -09, -10, -13, -14, -23, -24, WG1485004-1, WG1485277-3, WG1486007-1 and WG1485004-2/-3, WG1486007-2/-3 and WG1486007-4/-5: The initial calibration utilized a quadratic fit for Butyl benzyl phthalate, Bis(2-ethylhexyl)phthalate, Di-n-octylphthalate.

WG1486113-1/-2/-3: The initial calibration utilized a quadratic fit for Benzo(ghi)perylene.

In reference to question H:

L2117504-24: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (113%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1485277-1 Method Blank, associated with L2117504-03 through -10, has a concentration above the reporting limit for Naphthalene. Since the sample(s) were non-detect to the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.

The WG1485004-3 LCS/LCSD recoveries, associated with L2117504-01, are below the individual acceptance criteria for aniline (37%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

The WG1485277-2 LCS recoveries, associated with L2117504-03 through -10, are below the individual acceptance criteria for aniline (31%) and 4-chloroaniline (34%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

Case Narrative (continued)

The WG1485277-3 LCSD recovery, associated with L2117504-03 through -10, is below the individual acceptance criteria for aniline (25%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1485277-2/-3 LCS/LCSD RPDs, associated with L2117504-03 through -10, are above the acceptance criteria for hexachlorobenzene (21%), 2,4-dinitrotoluene (22%), 2,6-dinitrotoluene (28%), azobenzene (21%), fluoranthene (25%), 4-bromophenyl phenyl ether (21%), naphthalene (23%), bis(2-ethylhexyl)phthalate (25%), butyl benzyl phthalate (27%), di-n-butylphthalate (27%), di-n-octylphthalate (27%), diethyl phthalate (26%), dimethyl phthalate (23%), benzo(a)pyrene (23%), benzo(b)fluoranthene (24%), benzo(k)fluoranthene (25%), acenaphthylene (23%), anthracene (22%), benzo(ghi)perylene (24%), phenanthrene (21%), dibenzo(a,h)anthracene (21%), indeno(1,2,3-cd)pyrene (22%), pyrene (25%), aniline (21%), 2,4,6-trichlorophenol (24%), 4-nitrophenol (32%), 2,4-dinitrophenol (30%), pentachlorophenol (30%) and 2,4,5-trichlorophenol (24%).

The WG1486007-2 LCS recoveries, associated with L2117504-01, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -14, -15, -18, -19, -20, -21, -22, -23, and -24, are below the individual acceptance criteria for 3,3'-dichlorobenzidine (27%), aniline (16%) and 4-chloroaniline (30%) but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

The WG1486007-3 LCSD recovery, associated with L2117504-01, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -14, -15, -18, -19, -20, -21, -22, -23, and -24, is below the individual acceptance criteria for aniline (39%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1486007-2/-3 LCS/LCSD RPDs, associated with L2117504-01, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -14, -15, -18, -19, -20, -21, -22, -23, and -24, are above the acceptance criteria for 1,4-dichlorobenzene (22%), 3,3'-dichlorobenzidine (74%), bis(2-chloroisopropyl)ether (21%), hexachlorobutadiene (22%), hexachloroethane (23%), naphthalene (24%), nitrobenzene (25%), aniline (84%), 4-chloroaniline (31%), acetophenone (22%), 2-chlorophenol (26%), 2,4-dimethylphenol (34%), 2-nitrophenol (24%), phenol (30%), 2-methylphenol (24%) and 3-methylphenol/4-methylphenol (21%).

Case Narrative (continued)

The WG1486007-4/-5 MS/MSD recoveries, performed on L2117504-23, are outside the acceptance criteria for 3,3'-dichlorobenzidine (26%/36%), aniline (30%/30%) and 4-chloroaniline (33%/36%).
The WG1486007-4/-5 MS/MSD RPD, performed on L2117504-23, is outside the acceptance criteria for 3,3'-dichlorobenzidine (32%).
The WG1486113-2/-3 LCS/LCSD recoveries, associated with L2117504-12, -13, -15, -18, -19, -20, -21, and -22, are below the individual acceptance criteria for aniline (32%/35%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.
The WG1486113-2/-3 LCS/LCSD RPDs, associated with L2117504-12, -13, -15, -18, -19, -20, -21, and -22, are above the acceptance criteria for 1,2,4-trichlorobenzene (21%), bis(2-chloroethyl)ether (23%), 2-chloronaphthalene (29%), 1,2-dichlorobenzene (31%), 1,3-dichlorobenzene (21%), 3,3'-dichlorobenzidine (24%), 2,6-dinitrotoluene (24%), bis(2-chloroisopropyl)ether (30%), hexachlorobutadiene (24%), hexachloroethane (28%), isophorone (28%), nitrobenzene (41%), dimethyl phthalate (22%), acenaphthylene (27%), dibenzofuran (21%), 2-methylnaphthalene (32%), acetophenone (26%), 2,4,6-trichlorophenol (24%), 2-chlorophenol (29%), 2,4-dichlorophenol (29%), 2-nitrophenol (29%), 2-methylphenol (24%), 3-methylphenol/4-methylphenol (24%) and 2,4,5-trichlorophenol (30%).
The surrogate recoveries for the WG1486113-3 LCSD, associated with L2117504-12, -13, -15, -18, -19, -20, -21, and -22, are outside the acceptance criteria for 2-fluorophenol (111%) and 2,4,6-tribromophenol (129%).

Semivolatile Organics by SIM
L2117504-01, -03, -04RE, -07, -08RE, -11, -12, -17, -18, and -23: The initial calibration utilized a quadratic fit for Pentachlorophenol.
L2117504-03RE, -05, -06, -09, -10, -14, -15, -19, -20, -21, -22, and -24: The initial calibration utilized a quadratic fit for Pentachlorophenol.
WG1485070-1, WG1486021-1/-3, WG1486021-4/-5 and WG1486116-1/-2: The initial calibration utilized a quadratic fit for Pentachlorophenol.

Case Narrative (continued)

WG1485070-2/-3, WG1485279-1, WG1485279-2/-3, WG1486021-2, and WG1486116-3: The initial calibration utilized a quadratic fit for Pentachlorophenol.

In reference to question H:

L2117504-19: The surrogate recovery is outside the individual acceptance criteria for 4-terphenyl-d14 (137%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

L2117504-20: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (122%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

L2117504-24: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (151%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1485070-2/-3 LCS/LCSD RPD, associated with L2117504-01, is above the acceptance criteria for pentachlorophenol (21%).

The WG1485279-1 Method Blank, associated with L2117504-05, -06, -07, -09, -10, and -17, has a concentration above the reporting limit for Acenaphthene, Naphthalene and 2-Methylnaphthalene. The results of the original analysis are reported and are qualified with a "B" for any associated sample concentrations that are less than 10x the blank concentration for this analyte.

WG1485279-2: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (117%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

WG1486021-2/-3: The surrogate recoveries are outside the individual acceptance criteria for 2,4,6-tribromophenol (127%/121%) and 4-terphenyl-d14 (137%/134%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1486021-2 LCS recovery, associated with L2117504-11, -12, -14, -15, -18, -19, -20, -21, -22, -23, and -24, is above the individual acceptance criteria for benzo(k)fluoranthene (141%), but within the overall

Case Narrative (continued)

method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for these compounds.
WG1488688-1: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (113%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The WG1486116-2/-3 LCS/LCSD RPD, associated with L2117504-13, is above the acceptance criteria for pentachlorophenol (24%).

Non-MCP Related Narratives
Perfluorinated Alkyl Acids by Isotope Dilution
L2117504-11, -12, -16 and WG1484163-1/-2: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.
L2117504-11, -12, and -16: The MeOH fraction of the extraction is reported for the following compounds: Perfluorooctanesulfonamide (FOSA), N-Methyl Perfluorooctane Sulfonamide (NMeFOSA), N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA), N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE), and N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).
The WG1484163-1 Method Blank, associated with L2117504-11, -12, and -16, has a concentration above the reporting limit for NEtFOSAA. Since the sample(s) were non-detect to the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.
The WG1484163-2 LCS recovery, associated with L2117504-11, -12, and -16, is above the acceptance criteria for perfluorooctadecanoic acid (pfoda) (229%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

Alkalinity, Bicarbonate
L2117504-12: The Equipment Blank has a concentration above the reporting limit for Alkalinity, Bicarbonate.

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Case Narrative (continued)

Nitrogen, Nitrate

The WG1484145-4 MS recovery, performed on L2117504-19, is outside the acceptance criteria for nitrogen, nitrate (162%); however, the associated LCS recovery is within criteria. No further action was taken.

The WG1484147-4 MS recovery, performed on L2117504-23, is outside the acceptance criteria for nitrogen, nitrate (142%); however, the associated LCS recovery is within criteria. No further action was taken.

Nitrogen, Nitrite

The WG1484146-4 MS recovery, performed on L2117504-23, is outside the acceptance criteria for nitrogen, nitrite (125%); however, the associated LCS recovery is within criteria. No further action was taken.

Dissolved Organic Carbon

The samples were field filtered; a filter blank was not received.

Anions by Ion Chromatography

The WG1485869-3 MS recovery, performed on L2117504-11, is outside the acceptance criteria for sulfate (86%); however, the associated LCS recovery is within criteria. No further action was taken.

The WG1485870-3 MS recovery, performed on L2117504-18, is outside the acceptance criteria for chloride (69%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Caitlin Walukevich Caitlin Walukevich

Title: Technical Director/Representative Date: 04/22/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	HA20-CMT-1S-04072021	L2117504-07	1,2-Dichloroethane-d4	Surrogate	137	70-130	-	potential high bias
8260C	HA20-CMT-1S-04072021	L2117504-07	Dibromofluoromethane	Surrogate	134	70-130	-	potential high bias
8260C	MW-BS39-04072021	L2117504-08	1,2-Dichloroethane-d4	Surrogate	136	70-130	-	potential high bias
8260C	MW-BS39-04072021	L2117504-08	Dibromofluoromethane	Surrogate	136	70-130	-	potential high bias
8260C	MW-S14-04072021	L2117504-09	1,2-Dichloroethane-d4	Surrogate	133	70-130	-	potential high bias
8260C	MW-S14-04072021	L2117504-09	Dibromofluoromethane	Surrogate	131	70-130	-	potential high bias
8260C	MW-BS12-04072021	L2117504-11	1,2-Dichloroethane-d4	Surrogate	140	70-130	-	potential high bias
8260C	MW-BS12-04072021	L2117504-11	Dibromofluoromethane	Surrogate	145	70-130	-	potential high bias
8260C	MW-SM46-04072021	L2117504-15	1,2-Dichloroethane-d4	Surrogate	142	70-130	-	potential high bias
8260C	MW-SM46-04072021	L2117504-15	Dibromofluoromethane	Surrogate	138	70-130	-	potential high bias
8260C	MW-SD32-04072021	L2117504-18	1,2-Dichloroethane-d4	Surrogate	135	70-130	-	potential high bias
8260C	MW-SD32-04072021	L2117504-18	Dibromofluoromethane	Surrogate	133	70-130	-	potential high bias
8260C	Batch QC	WG1487621-3	Dichlorodifluoromethane	LCS	60	70-130	09,11,15,18	potential low bias
8260C	Batch QC	WG1487621-4	Dichlorodifluoromethane	LCSD	66	70-130	09,11,15,18	potential low bias
8260C	Batch QC	WG1487632-3	Dichlorodifluoromethane	LCS	62	70-130	01-08	potential low bias
8260C	Batch QC	WG1487632-3	1,4-Dioxane	LCS	136	70-130	01-08	potential high bias
8260C	Batch QC	WG1487632-4	Dichlorodifluoromethane	LCSD	65	70-130	01-08	potential low bias
8260C	Batch QC	WG1487632-4	1,4-Dioxane	LCSD	134	70-130	01-08	potential high bias
8260C	Batch QC	WG1487906-3	1,1,2,2-Tetrachloroethane	LCS	140	70-130	10,12-14,17,19,21-24	potential high bias
8260C	Batch QC	WG1487906-3	1,2,3-Trichloropropane	LCS	140	70-130	10,12-14,17,19,21-24	potential high bias
8260C	Batch QC	WG1487906-4	1,4-Dioxane	LCSD	30	20	10,12-14,17,19,21-24	non-directional bias
8260C	Batch QC (L2117504-23)	WG1487906-6	Bromomethane	MS	63	70-130	10,12-14,17,19,21-24	potential low bias
8260C	Batch QC (L2117504-23)	WG1487906-7	Bromomethane	MSD	69	70-130	10,12-14,17,19,21-24	potential low bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8260C	Batch QC (L2117504-23)	WG1487906-7	2-Hexanone	MSD	26	20	10,12-14,17,19,21-24	non-directional bias
8260C	Batch QC	WG1489044-4	Bromoform	LCSD	21	20	20	non-directional bias
8260C	Batch QC	WG1489044-4	1,1,2,2-Tetrachloroethane	LCSD	23	20	20	non-directional bias
8260C	Batch QC	WG1489044-4	Methyl tert butyl ether	LCSD	22	20	20	non-directional bias
8260C	Batch QC	WG1489044-4	Methyl ethyl ketone	LCSD	24	20	20	non-directional bias
8260C	Batch QC	WG1489044-4	Methyl isobutyl ketone	LCSD	25	20	20	non-directional bias
8260C	Batch QC	WG1489044-4	2-Hexanone	LCSD	25	20	20	non-directional bias
MCP Semivolatile Organics - Westborough Lab								
8270D	HA20-CMT-1D1-04072021	L2117504-24	2,4,6-Tribromophenol	Surrogate	113	15-110	-	potential high bias
8270D	Batch QC	WG1485004-3	Aniline	LCSD	37	40-140	01	potential low bias
8270D	Batch QC	WG1485277-2	Aniline	LCS	31	40-140	03-10,17	potential low bias
8270D	Batch QC	WG1485277-2	4-Chloroaniline	LCS	34	40-140	03-10,17	potential low bias
8270D	Batch QC	WG1485277-3	Hexachlorobenzene	LCSD	21	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	2,4-Dinitrotoluene	LCSD	22	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	2,6-Dinitrotoluene	LCSD	28	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Azobenzene	LCSD	21	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Fluoranthene	LCSD	25	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	4-Bromophenyl phenyl ether	LCSD	21	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Naphthalene	LCSD	23	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Bis(2-ethylhexyl)phthalate	LCSD	25	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Butyl benzyl phthalate	LCSD	27	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Di-n-butylphthalate	LCSD	27	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Di-n-octylphthalate	LCSD	27	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Diethyl phthalate	LCSD	26	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Dimethyl phthalate	LCSD	23	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Benzo(a)pyrene	LCSD	23	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Benzo(b)fluoranthene	LCSD	24	20	03-10,17	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC	WG1485277-3	Benzo(k)fluoranthene	LCSD	25	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Acenaphthylene	LCSD	23	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Anthracene	LCSD	22	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Benzo(ghi)perylene	LCSD	24	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Phenanthrene	LCSD	21	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Dibenzo(a,h)anthracene	LCSD	21	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Indeno(1,2,3-cd)pyrene	LCSD	22	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Pyrene	LCSD	25	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Aniline	LCSD	21	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Aniline	LCSD	25	40-140	03-10,17	potential low bias
8270D	Batch QC	WG1485277-3	2,4,6-Trichlorophenol	LCSD	24	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	4-Nitrophenol	LCSD	32	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	2,4-Dinitrophenol	LCSD	30	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	Pentachlorophenol	LCSD	30	20	03-10,17	non-directional bias
8270D	Batch QC	WG1485277-3	2,4,5-Trichlorophenol	LCSD	24	20	03-10,17	non-directional bias
8270D	Batch QC	WG1486007-2	3,3'-Dichlorobenzidine	LCS	27	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC	WG1486007-2	Aniline	LCS	16	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC	WG1486007-2	4-Chloroaniline	LCS	30	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC	WG1486007-3	1,4-Dichlorobenzene	LCSD	22	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	3,3'-Dichlorobenzidine	LCSD	74	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	Bis(2-chloroisopropyl)ether	LCSD	21	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	Hexachlorobutadiene	LCSD	22	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	Hexachloroethane	LCSD	23	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	Naphthalene	LCSD	24	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	Nitrobenzene	LCSD	25	20	11-12,14-	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
							15,18-24	
8270D	Batch QC	WG1486007-3	Aniline	LCSD	39	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC	WG1486007-3	Aniline	LCSD	84	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	4-Chloroaniline	LCSD	31	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	Acetophenone	LCSD	22	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	2-Chlorophenol	LCSD	26	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	2,4-Dimethylphenol	LCSD	34	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	2-Nitrophenol	LCSD	24	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	Phenol	LCSD	30	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	2-Methylphenol	LCSD	24	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC	WG1486007-3	3-Methylphenol/4-Methylphenol	LCSD	21	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC (L2117504-23)	WG1486007-4	3,3'-Dichlorobenzidine	MS	26	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC (L2117504-23)	WG1486007-4	Aniline	MS	30	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC (L2117504-23)	WG1486007-4	4-Chloroaniline	MS	33	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC (L2117504-23)	WG1486007-5	3,3'-Dichlorobenzidine	MSD	32	20	11-12,14-15,18-24	non-directional bias
8270D	Batch QC (L2117504-23)	WG1486007-5	3,3'-Dichlorobenzidine	MSD	36	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC (L2117504-23)	WG1486007-5	Aniline	MSD	30	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC (L2117504-23)	WG1486007-5	4-Chloroaniline	MSD	36	40-140	11-12,14-15,18-24	potential low bias
8270D	Batch QC	WG1486113-2	Aniline	LCS	32	40-140	13	potential low bias
8270D	Batch QC	WG1486113-3	1,2,4-Trichlorobenzene	LCSD	21	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Bis(2-chloroethyl)ether	LCSD	23	20	13	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC	WG1486113-3	2-Chloronaphthalene	LCSD	29	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	1,2-Dichlorobenzene	LCSD	31	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	1,3-Dichlorobenzene	LCSD	21	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	3,3'-Dichlorobenzidine	LCSD	24	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	2,6-Dinitrotoluene	LCSD	24	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Bis(2-chloroisopropyl)ether	LCSD	30	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Hexachlorobutadiene	LCSD	24	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Hexachloroethane	LCSD	28	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Isophorone	LCSD	28	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Nitrobenzene	LCSD	41	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Dimethyl phthalate	LCSD	22	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Acenaphthylene	LCSD	27	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Aniline	LCSD	35	40-140	13	potential low bias
8270D	Batch QC	WG1486113-3	Dibenzofuran	LCSD	21	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	2-Methylnaphthalene	LCSD	32	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	Acetophenone	LCSD	26	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	2,4,6-Trichlorophenol	LCSD	24	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	2-Chlorophenol	LCSD	29	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	2,4-Dichlorophenol	LCSD	29	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	2-Nitrophenol	LCSD	29	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	2-Methylphenol	LCSD	24	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	3-Methylphenol/4-Methylphenol	LCSD	24	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	2,4,5-Trichlorophenol	LCSD	30	20	13	non-directional bias
8270D	Batch QC	WG1486113-3	2-Fluorophenol	Surrogate	111	15-110	-	potential high bias
8270D	Batch QC	WG1486113-3	2,4,6-Tribromophenol	Surrogate	129	15-110	-	potential high bias
MCP Semivolatile Organics by SIM - Westborough Lab								
8270D-SIM	MW-BS32-04072021	L2117504-19	4-Terphenyl-d14	Surrogate	137	30-130	-	potential high bias
8270D-SIM	MW-S63-04072021	L2117504-20	2,4,6-Tribromophenol	Surrogate	122	15-110	-	potential high bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D-SIM	HA20-CMT-1D1-04072021	L2117504-24	2,4,6-Tribromophenol	Surrogate	151	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1485070-3	Pentachlorophenol	LCSD	21	20	01	non-directional bias
8270D-SIM	Batch QC	WG1485279-2	2,4,6-Tribromophenol	Surrogate	117	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1486021-2	Benzo(k)fluoranthene	LCS	141	40-140	11-12,14-15,18-24	potential high bias
8270D-SIM	Batch QC	WG1486021-2	2,4,6-Tribromophenol	Surrogate	127	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1486021-2	4-Terphenyl-d14	Surrogate	137	30-130	-	potential high bias
8270D-SIM	Batch QC	WG1486021-3	2,4,6-Tribromophenol	Surrogate	121	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1486021-3	4-Terphenyl-d14	Surrogate	134	30-130	-	potential high bias
8270D-SIM	Batch QC	WG1486116-3	Pentachlorophenol	LCSD	24	20	13	non-directional bias
8270D-SIM	Laboratory Method Bl	WG1488688-1	2,4,6-Tribromophenol	Surrogate	113	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1488688-3	Naphthalene	LCSD	21	20	03-04,08	non-directional bias
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab								
LCMSMS-ID	Batch QC	WG1484163-2	Perfluorooctadecanoic Acid (PFODA)	LCS	229	10-119	11-12,16	potential high bias
LCMSMS-ID	Batch QC (L2116995-08)	WG1484163-3	Perfluorooctadecanoic Acid (PFODA)	MS	335	10-119	11-12,16	potential high bias
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2117504-11)	WG1485869-3	Sulfate	MS	86	90-110	01,03,05,07,10-12	potential low bias
300.0	Batch QC (L2117504-18)	WG1485870-3	Chloride	MS	69	90-110	13-14,18-20,22,24	potential low bias
General Chemistry - Westborough Lab								
353.2	Batch QC (L2117504-19)	WG1484145-4	Nitrogen, Nitrate	MS	162	83-113	11-15,17-21	potential high bias
353.2	Batch QC (L2117504-23)	WG1484146-4	Nitrogen, Nitrite	MS	125	80-120	22-24	potential high bias
353.2	Batch QC (L2117504-23)	WG1484147-4	Nitrogen, Nitrate	MS	142	83-113	22-24	potential high bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-01
Client ID: MW-S62A-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 17:20
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 10:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.5		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-01 Date Collected: 04/06/21 17:20
Client ID: MW-S62A-04062021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-01	Date Collected:	04/06/21 17:20
Client ID:	MW-S62A-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	126		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-02
Client ID: TRIP BLANK1-04072021
Sample Location: CONCORD, MA

Date Collected: 03/30/21 00:00
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:56
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-02
Client ID: TRIP BLANK1-04072021
Sample Location: CONCORD, MA

Date Collected: 03/30/21 00:00
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-02 Date Collected: 03/30/21 00:00
Client ID: TRIP BLANK1-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	115		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-03	Date Collected:	04/06/21 17:10
Client ID:	MW-BS28-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 11:18
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	1.6		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	1.6		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	1.6		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-03
Client ID: MW-BS28-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 17:10
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	5.8		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.74	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.74	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-03	Date Collected:	04/06/21 17:10
Client ID:	MW-BS28-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	120		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-04
Client ID: MW-BS17-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 11:59
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.29	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-04 Date Collected: 04/07/21 09:30
Client ID: MW-BS17-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.36	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.36	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-04	Date Collected:	04/07/21 09:30
Client ID:	MW-BS17-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	129		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	129		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-05
Client ID: MW-SD62A-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 12:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.9		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS　　**Lab Number:** L2117504
Project Number: 3252H　　**Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-05　　Date Collected: 04/07/21 09:30
Client ID: MW-SD62A-04072021　　Date Received: 04/07/21
Sample Location: CONCORD, MA　　Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-05
Client ID: MW-SD62A-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	122		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-06
Client ID: HB-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:55
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 13:22
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	5.9		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-06	Date Collected:	04/07/21 09:55
Client ID:	HB-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.5		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.33	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.33	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-06	Date Collected:	04/07/21 09:55
Client ID:	HB-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	125		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-07
Client ID: HA20-CMT-1S-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 10:20
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 14:03
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.0		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-07
Date Collected: 04/07/21 10:20
Client ID: HA20-CMT-1S-04072021
Date Received: 04/07/21
Sample Location: CONCORD, MA
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-07	Date Collected:	04/07/21 10:20
Client ID:	HA20-CMT-1S-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**137**	Q	70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	**134**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-08	Date Collected:	04/07/21 11:00
Client ID:	MW-BS39-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 14:44
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-08
Client ID: MW-BS39-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 11:00
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-08 Date Collected: 04/07/21 11:00
Client ID: MW-BS39-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**136**	Q	70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	**136**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-09 Date Collected: 04/07/21 11:00
Client ID: MW-S14-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 15:46
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-09	Date Collected:	04/07/21 11:00
Client ID:	MW-S14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-09	Date Collected:	04/07/21 11:00
Client ID:	MW-S14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**133**	Q	70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	**131**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-10
Client ID: MW-SD63-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 11:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 06:27
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.5		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-10 Date Collected: 04/07/21 11:30
Client ID: MW-SD63-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-10	Date Collected:	04/07/21 11:30
Client ID:	MW-SD63-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	100		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-11
Client ID: MW-BS12-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 16:27
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-11 Date Collected: 04/07/21 11:30
Client ID: MW-BS12-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-11	Date Collected:	04/07/21 11:30
Client ID:	MW-BS12-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**140**	Q	70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	**145**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-12
Client ID: EQBLANK1-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 12:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 06:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-12	Date Collected:	04/07/21 12:00
Client ID:	EQBLANK1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-12	Date Collected:	04/07/21 12:00
Client ID:	EQBLANK1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	102		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-13 Date Collected: 04/07/21 12:45
Client ID: HA20-CMT-11-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 07:27
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.33	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	1.5		ug/l	1.0	0.20	1
Ethylbenzene	0.20	J	ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-13	Date Collected:	04/07/21 12:45
Client ID:	HA20-CMT-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	0.82	J	ug/l	2.0	0.33	1
o-Xylene	0.41	J	ug/l	1.0	0.39	1
Xylenes, Total	1.2	J	ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-13	Date Collected:	04/07/21 12:45
Client ID:	HA20-CMT-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	120		70-130
Dibromofluoromethane	101		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-14
Client ID: MW-SD02-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 13:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 07:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.2		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-14	Date Collected:	04/07/21 13:00
Client ID:	MW-SD02-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-14	Date Collected:	04/07/21 13:00
Client ID:	MW-SD02-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	98		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-15	Date Collected:	04/07/21 13:30
Client ID:	MW-SM46-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Matrix:	Water
Analytical Method:	97,8260C
Analytical Date:	04/17/21 17:49
Analyst:	MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-15	Date Collected:	04/07/21 13:30
Client ID:	MW-SM46-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.29	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	0.66	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.43	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.43	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-15	Date Collected:	04/07/21 13:30
Client ID:	MW-SM46-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**142**	Q	70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	**138**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-17
Client ID: MW-S32-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 08:50
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 08:28
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.59	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	0.72	J	ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.45	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-17	Date Collected:	04/07/21 08:50
Client ID:	MW-S32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	2.2		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-17	Date Collected:	04/07/21 08:50
Client ID:	MW-S32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	121		70-130
Dibromofluoromethane	101		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-18	Date Collected:	04/07/21 10:50
Client ID:	MW-SD32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/17/21 18:30
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.24	J	ug/l	1.0	0.21	1
Chloroform	0.27	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-18	Date Collected:	04/07/21 10:50
Client ID:	MW-SD32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.21	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-18	Date Collected:	04/07/21 10:50
Client ID:	MW-SD32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**135**	Q	70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	**133**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-19
Client ID: MW-BS32-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 14:10
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 08:58
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-19	Date Collected:	04/07/21 14:10
Client ID:	MW-BS32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-19 Date Collected: 04/07/21 14:10
Client ID: MW-BS32-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	121		70-130
Dibromofluoromethane	101		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-20
Client ID: MW-S63-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 14:15
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/21/21 10:42
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.4		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-20	Date Collected:	04/07/21 14:15
Client ID:	MW-S63-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-20	Date Collected:	04/07/21 14:15
Client ID:	MW-S63-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	111		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-21 Date Collected: 04/07/21 13:55
Client ID: MW-BS14-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 09:28
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-21	Date Collected:	04/07/21 13:55
Client ID:	MW-BS14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.2		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.1		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.1		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-21	Date Collected:	04/07/21 13:55
Client ID:	MW-BS14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	120		70-130
Dibromofluoromethane	100		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-22
Client ID: MW-SD24-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 11:29
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.1		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-22	Date Collected:	04/07/21 15:30
Client ID:	MW-SD24-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-22	Date Collected:	04/07/21 15:30
Client ID:	MW-SD24-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	121		70-130
Dibromofluoromethane	102		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-23
Client ID: HA-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:40
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 04:26
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-23 Date Collected: 04/07/21 15:40
Client ID: HA-11-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	2.7	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	2.7		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-23 Date Collected: 04/07/21 15:40
Client ID: HA-11-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	100		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-24	Date Collected:	04/07/21 16:00
Client ID:	HA20-CMT-1D1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 04:56
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	0.73	J	ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.44	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	0.40	J	ug/l	0.50	0.16	1
Toluene	1.8		ug/l	1.0	0.20	1
Ethylbenzene	0.26	J	ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-24	Date Collected:	04/07/21 16:00
Client ID:	HA20-CMT-1D1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	0.86	J	ug/l	2.0	0.33	1
o-Xylene	0.48	J	ug/l	1.0	0.39	1
Xylenes, Total	1.3	J	ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	10		ug/l	5.0	1.5	1
Carbon disulfide	0.37	J	ug/l	2.0	0.30	1
Methyl ethyl ketone	2.3	J	ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	1.8	J	ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-24	Date Collected:	04/07/21 16:00
Client ID:	HA20-CMT-1D1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	94		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:36
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09,11,15,18 Batch: WG1487621-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:36
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09,11,15,18 Batch: WG1487621-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:36
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09,11,15,18 Batch: WG1487621-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	119		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:15
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-08 Batch: WG1487632-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:15
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-08 Batch: WG1487632-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/17/21 09:15
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-08 Batch: WG1487632-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	115		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/19/21 03:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 10,12-14,17,19,21-24 Batch: WG1487906-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/19/21 03:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 10,12-14,17,19,21-24 Batch: WG1487906-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/19/21 03:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 10,12-14,17,19,21-24 Batch: WG1487906-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	96		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/21/21 08:38
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 20 Batch: WG1489044-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/21/21 08:38
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 20 Batch: WG1489044-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/21/21 08:38
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 20 Batch: WG1489044-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	113		70-130

Lab Control Sample Analysis
Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,11,15,18 Batch: WG1487621-3 WG1487621-4								
Methylene chloride	110		120		70-130	9		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	99		92		70-130	7		20
1,1,2-Trichloroethane	100		98		70-130	2		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		99		70-130	1		20
Trichlorofluoromethane	100		100		70-130	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	100		100		70-130	0		20
trans-1,3-Dichloropropene	100		98		70-130	2		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	84		84		70-130	0		20
1,1,2,2-Tetrachloroethane	100		100		70-130	0		20
Benzene	100		100		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	99		100		70-130	1		20
Bromomethane	88		86		70-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,11,15,18 Batch: WG1487621-3 WG1487621-4								
Vinyl chloride	94		98		70-130	4		20
Chloroethane	110		110		70-130	0		20
1,1-Dichloroethene	100		110		70-130	10		20
trans-1,2-Dichloroethene	100		110		70-130	10		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	98		95		70-130	3		20
1,3-Dichlorobenzene	99		95		70-130	4		20
1,4-Dichlorobenzene	96		95		70-130	1		20
Methyl tert butyl ether	97		96		70-130	1		20
p/m-Xylene	105		100		70-130	5		20
o-Xylene	105		100		70-130	5		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	100		100		70-130	0		20
Styrene	105		100		70-130	5		20
Dichlorodifluoromethane	**60**	Q	**66**	Q	70-130	10		20
Acetone	120		130		70-130	8		20
Carbon disulfide	110		110		70-130	0		20
Methyl ethyl ketone	120		110		70-130	9		20
Methyl isobutyl ketone	100		100		70-130	0		20
2-Hexanone	110		120		70-130	9		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	120		130		70-130	8		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,11,15,18 Batch: WG1487621-3 WG1487621-4								
2,2-Dichloropropane	110		110		70-130	0		20
1,2-Dibromoethane	99		93		70-130	6		20
1,3-Dichloropropane	100		97		70-130	3		20
1,1,1,2-Tetrachloroethane	100		93		70-130	7		20
Bromobenzene	93		90		70-130	3		20
n-Butylbenzene	100		100		70-130	0		20
sec-Butylbenzene	99		100		70-130	1		20
tert-Butylbenzene	96		96		70-130	0		20
o-Chlorotoluene	100		98		70-130	2		20
p-Chlorotoluene	99		98		70-130	1		20
1,2-Dibromo-3-chloropropane	92		98		70-130	6		20
Hexachlorobutadiene	100		97		70-130	3		20
Isopropylbenzene	95		93		70-130	2		20
p-Isopropyltoluene	98		96		70-130	2		20
Naphthalene	89		87		70-130	2		20
n-Propylbenzene	99		98		70-130	1		20
1,2,3-Trichlorobenzene	91		88		70-130	3		20
1,2,4-Trichlorobenzene	95		91		70-130	4		20
1,3,5-Trimethylbenzene	98		96		70-130	2		20
1,2,4-Trimethylbenzene	95		95		70-130	0		20
Diethyl ether	100		100		70-130	0		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20

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Project Name: NUCLEAR METALS
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,11,15,18 Batch: WG1487621-3 WG1487621-4								
Tertiary-Amyl Methyl Ether	94		94		70-130	0		20
1,4-Dioxane	122		108		70-130	12		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		108		70-130
Toluene-d8	107		101		70-130
4-Bromofluorobenzene	96		96		70-130
Dibromofluoromethane	106		109		70-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-08 Batch: WG1487632-3 WG1487632-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	110		120		70-130	9		20
Chloroform	120		120		70-130	0		20
Carbon tetrachloride	110		100		70-130	10		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	100		110		70-130	10		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	98		100		70-130	2		20
Trichlorofluoromethane	98		100		70-130	2		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	100		110		70-130	10		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	91		92		70-130	1		20
1,1,2,2-Tetrachloroethane	110		110		70-130	0		20
Benzene	100		100		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		110		70-130	10		20
Chloromethane	92		93		70-130	1		20
Bromomethane	110		110		70-130	0		20

Lab Control Sample Analysis
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-08 Batch: WG1487632-3 WG1487632-4								
Vinyl chloride	100		100		70-130	0		20
Chloroethane	120		110		70-130	9		20
1,1-Dichloroethene	100		100		70-130	0		20
trans-1,2-Dichloroethene	100		110		70-130	10		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	97		99		70-130	2		20
1,3-Dichlorobenzene	98		100		70-130	2		20
1,4-Dichlorobenzene	97		100		70-130	3		20
Methyl tert butyl ether	96		97		70-130	1		20
p/m-Xylene	100		105		70-130	5		20
o-Xylene	100		105		70-130	5		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	99		110		70-130	11		20
Styrene	105		105		70-130	0		20
Dichlorodifluoromethane	**62**	Q	**65**	Q	70-130	5		20
Acetone	120		130		70-130	8		20
Carbon disulfide	100		110		70-130	10		20
Methyl ethyl ketone	110		120		70-130	9		20
Methyl isobutyl ketone	88		96		70-130	9		20
2-Hexanone	96		100		70-130	4		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	120		130		70-130	8		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-08 Batch: WG1487632-3 WG1487632-4								
2,2-Dichloropropane	110		110		70-130	0		20
1,2-Dibromoethane	97		99		70-130	2		20
1,3-Dichloropropane	98		100		70-130	2		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	91		96		70-130	5		20
n-Butylbenzene	96		100		70-130	4		20
sec-Butylbenzene	96		100		70-130	4		20
tert-Butylbenzene	95		100		70-130	5		20
o-Chlorotoluene	98		110		70-130	12		20
p-Chlorotoluene	99		100		70-130	1		20
1,2-Dibromo-3-chloropropane	100		100		70-130	0		20
Hexachlorobutadiene	92		98		70-130	6		20
Isopropylbenzene	94		100		70-130	6		20
p-Isopropyltoluene	94		100		70-130	6		20
Naphthalene	84		88		70-130	5		20
n-Propylbenzene	98		100		70-130	2		20
1,2,3-Trichlorobenzene	92		92		70-130	0		20
1,2,4-Trichlorobenzene	89		91		70-130	2		20
1,3,5-Trimethylbenzene	94		100		70-130	6		20
1,2,4-Trimethylbenzene	93		100		70-130	7		20
Diethyl ether	100		100		70-130	0		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	99		100		70-130	1		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-08 Batch: WG1487632-3 WG1487632-4								
Tertiary-Amyl Methyl Ether	89		95		70-130	7		20
1,4-Dioxane	**136**	Q	**134**	Q	70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		101		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	95		97		70-130
Dibromofluoromethane	109		106		70-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 10,12-14,17,19,21-24 Batch: WG1487906-3 WG1487906-4								
Methylene chloride	90		85		70-130	6		20
1,1-Dichloroethane	91		85		70-130	7		20
Chloroform	89		84		70-130	6		20
Carbon tetrachloride	87		84		70-130	4		20
1,2-Dichloropropane	93		86		70-130	8		20
Dibromochloromethane	110		100		70-130	10		20
1,1,2-Trichloroethane	120		110		70-130	9		20
Tetrachloroethene	100		92		70-130	8		20
Chlorobenzene	110		100		70-130	10		20
Trichlorofluoromethane	87		84		70-130	4		20
1,2-Dichloroethane	99		94		70-130	5		20
1,1,1-Trichloroethane	87		82		70-130	6		20
Bromodichloromethane	91		86		70-130	6		20
trans-1,3-Dichloropropene	120		110		70-130	9		20
cis-1,3-Dichloropropene	96		91		70-130	5		20
1,1-Dichloropropene	87		84		70-130	4		20
Bromoform	130		110		70-130	17		20
1,1,2,2-Tetrachloroethane	**140**	Q	120		70-130	15		20
Benzene	89		84		70-130	6		20
Toluene	110		100		70-130	10		20
Ethylbenzene	120		110		70-130	9		20
Chloromethane	89		84		70-130	6		20
Bromomethane	98		86		70-130	13		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 10,12-14,17,19,21-24 Batch: WG1487906-3 WG1487906-4								
Vinyl chloride	88		85		70-130	3		20
Chloroethane	90		86		70-130	5		20
1,1-Dichloroethene	77		80		70-130	4		20
trans-1,2-Dichloroethene	83		78		70-130	6		20
Trichloroethene	83		77		70-130	8		20
1,2-Dichlorobenzene	120		110		70-130	9		20
1,3-Dichlorobenzene	120		110		70-130	9		20
1,4-Dichlorobenzene	110		100		70-130	10		20
Methyl tert butyl ether	92		87		70-130	6		20
p/m-Xylene	100		90		70-130	11		20
o-Xylene	100		95		70-130	5		20
cis-1,2-Dichloroethene	86		81		70-130	6		20
Dibromomethane	93		87		70-130	7		20
1,2,3-Trichloropropane	**140**	Q	130		70-130	7		20
Styrene	105		95		70-130	10		20
Dichlorodifluoromethane	79		77		70-130	3		20
Acetone	100		97		70-130	3		20
Carbon disulfide	77		79		70-130	3		20
Methyl ethyl ketone	110		100		70-130	10		20
Methyl isobutyl ketone	110		100		70-130	10		20
2-Hexanone	110		110		70-130	0		20
Bromochloromethane	88		81		70-130	8		20
Tetrahydrofuran	100		96		70-130	4		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 10,12-14,17,19,21-24 Batch: WG1487906-3 WG1487906-4								
2,2-Dichloropropane	98		91		70-130	7		20
1,2-Dibromoethane	110		100		70-130	10		20
1,3-Dichloropropane	120		110		70-130	9		20
1,1,1,2-Tetrachloroethane	110		100		70-130	10		20
Bromobenzene	120		110		70-130	9		20
n-Butylbenzene	110		100		70-130	10		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	110		100		70-130	10		20
o-Chlorotoluene	120		110		70-130	9		20
p-Chlorotoluene	120		110		70-130	9		20
1,2-Dibromo-3-chloropropane	120		110		70-130	9		20
Hexachlorobutadiene	99		94		70-130	5		20
Isopropylbenzene	120		110		70-130	9		20
p-Isopropyltoluene	99		90		70-130	10		20
Naphthalene	120		110		70-130	9		20
n-Propylbenzene	120		110		70-130	9		20
1,2,3-Trichlorobenzene	120		110		70-130	9		20
1,2,4-Trichlorobenzene	110		100		70-130	10		20
1,3,5-Trimethylbenzene	110		100		70-130	10		20
1,2,4-Trimethylbenzene	120		110		70-130	9		20
Diethyl ether	88		89		70-130	1		20
Diisopropyl Ether	96		92		70-130	4		20
Ethyl-Tert-Butyl-Ether	93		89		70-130	4		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 10,12-14,17,19,21-24 Batch: WG1487906-3 WG1487906-4								
Tertiary-Amyl Methyl Ether	92		88		70-130	4		20
1,4-Dioxane	114		84		70-130	**30**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	105		105		70-130
Toluene-d8	111		111		70-130
4-Bromofluorobenzene	108		107		70-130
Dibromofluoromethane	93		94		70-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 20 Batch: WG1489044-3 WG1489044-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	98		100		70-130	2		20
1,2-Dichloropropane	96		100		70-130	4		20
Dibromochloromethane	88		100		70-130	13		20
1,1,2-Trichloroethane	87		99		70-130	13		20
Tetrachloroethene	100		110		70-130	10		20
Chlorobenzene	100		110		70-130	10		20
Trichlorofluoromethane	110		100		70-130	10		20
1,2-Dichloroethane	95		100		70-130	5		20
1,1,1-Trichloroethane	100		100		70-130	0		20
Bromodichloromethane	96		100		70-130	4		20
trans-1,3-Dichloropropene	90		99		70-130	10		20
cis-1,3-Dichloropropene	95		100		70-130	5		20
1,1-Dichloropropene	100		110		70-130	10		20
Bromoform	77		95		70-130	**21**	Q	20
1,1,2,2-Tetrachloroethane	74		93		70-130	**23**	Q	20
Benzene	99		100		70-130	1		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	110		100		70-130	10		20
Bromomethane	100		100		70-130	0		20

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Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 20 Batch: WG1489044-3 WG1489044-4								
Vinyl chloride	110		100		70-130	10		20
Chloroethane	110		100		70-130	10		20
1,1-Dichloroethene	110		110		70-130	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	99		100		70-130	1		20
1,2-Dichlorobenzene	93		100		70-130	7		20
1,3-Dichlorobenzene	97		100		70-130	3		20
1,4-Dichlorobenzene	96		100		70-130	4		20
Methyl tert butyl ether	88		110		70-130	**22**	Q	20
p/m-Xylene	110		115		70-130	4		20
o-Xylene	110		115		70-130	4		20
cis-1,2-Dichloroethene	100		110		70-130	10		20
Dibromomethane	94		100		70-130	6		20
1,2,3-Trichloropropane	77		92		70-130	18		20
Styrene	105		105		70-130	0		20
Dichlorodifluoromethane	110		110		70-130	0		20
Acetone	94		99		70-130	5		20
Carbon disulfide	100		100		70-130	0		20
Methyl ethyl ketone	77		98		70-130	**24**	Q	20
Methyl isobutyl ketone	74		95		70-130	**25**	Q	20
2-Hexanone	76		98		70-130	**25**	Q	20
Bromochloromethane	100		110		70-130	10		20
Tetrahydrofuran	88		100		70-130	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 20 Batch: WG1489044-3 WG1489044-4								
2,2-Dichloropropane	100		110		70-130	10		20
1,2-Dibromoethane	90		100		70-130	11		20
1,3-Dichloropropane	92		100		70-130	8		20
1,1,1,2-Tetrachloroethane	95		100		70-130	5		20
Bromobenzene	91		100		70-130	9		20
n-Butylbenzene	98		100		70-130	2		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		110		70-130	10		20
o-Chlorotoluene	98		100		70-130	2		20
p-Chlorotoluene	97		100		70-130	3		20
1,2-Dibromo-3-chloropropane	84		100		70-130	17		20
Hexachlorobutadiene	99		110		70-130	11		20
Isopropylbenzene	97		100		70-130	3		20
p-Isopropyltoluene	97		100		70-130	3		20
Naphthalene	88		100		70-130	13		20
n-Propylbenzene	98		100		70-130	2		20
1,2,3-Trichlorobenzene	94		99		70-130	5		20
1,2,4-Trichlorobenzene	96		100		70-130	4		20
1,3,5-Trimethylbenzene	97		100		70-130	3		20
1,2,4-Trimethylbenzene	96		100		70-130	4		20
Diethyl ether	95		110		70-130	15		20
Diisopropyl Ether	94		100		70-130	6		20
Ethyl-Tert-Butyl-Ether	89		100		70-130	12		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 20 Batch: WG1489044-3 WG1489044-4								
Tertiary-Amyl Methyl Ether	88		100		70-130	13		20
1,4-Dioxane	106		106		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	85		90		70-130
Toluene-d8	104		105		70-130
4-Bromofluorobenzene	95		99		70-130
Dibromofluoromethane	100		99		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 10,12-14,17,19,21-24 QC Batch ID: WG1487906-6 WG1487906-7 QC Sample: L2117504-23 Client ID: HA-11-04072021												
Methylene chloride	ND	10	7.9	79		8.2	82		70-130	4		20
1,1-Dichloroethane	ND	10	8.7	87		8.6	86		70-130	1		20
Chloroform	ND	10	8.5	85		8.3	83		70-130	2		20
Carbon tetrachloride	ND	10	8.6	86		8.5	85		70-130	1		20
1,2-Dichloropropane	ND	10	8.5	85		8.6	86		70-130	1		20
Dibromochloromethane	ND	10	9.8	98		9.7	97		70-130	1		20
1,1,2-Trichloroethane	ND	10	10	100		10	100		70-130	0		20
Tetrachloroethene	ND	10	9.3	93		9.0	90		70-130	3		20
Chlorobenzene	ND	10	9.6	96		9.7	97		70-130	1		20
Trichlorofluoromethane	ND	10	8.6	86		8.6	86		70-130	0		20
1,2-Dichloroethane	ND	10	9.2	92		9.1	91		70-130	1		20
1,1,1-Trichloroethane	ND	10	8.5	85		8.4	84		70-130	1		20
Bromodichloromethane	ND	10	8.5	85		8.4	84		70-130	1		20
trans-1,3-Dichloropropene	ND	10	10	100		10	100		70-130	0		20
cis-1,3-Dichloropropene	ND	10	8.3	83		8.3	83		70-130	0		20
1,1-Dichloropropene	ND	10	8.4	84		8.5	85		70-130	1		20
Bromoform	ND	10	11	110		11	110		70-130	0		20
1,1,2,2-Tetrachloroethane	ND	10	12	120		12	120		70-130	0		20
Benzene	ND	10	8.4	84		8.3	83		70-130	1		20
Toluene	ND	10	9.9	99		10	100		70-130	1		20
Ethylbenzene	ND	10	10	100		10	100		70-130	0		20
Chloromethane	ND	10	8.4	84		8.6	86		70-130	2		20
Bromomethane	ND	10	6.3	**63**	Q	6.9	**69**	Q	70-130	9		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 10,12-14,17,19,21-24 QC Batch ID: WG1487906-6 WG1487906-7 QC Sample: L2117504-23 Client ID: HA-11-04072021												
Vinyl chloride	ND	10	8.5	85		8.8	88		70-130	3		20
Chloroethane	ND	10	8.6	86		8.6	86		70-130	0		20
1,1-Dichloroethene	ND	10	7.9	79		7.4	74		70-130	7		20
trans-1,2-Dichloroethene	ND	10	7.9	79		7.9	79		70-130	0		20
Trichloroethene	ND	10	7.9	79		7.8	78		70-130	1		20
1,2-Dichlorobenzene	ND	10	10	100		10	100		70-130	0		20
1,3-Dichlorobenzene	ND	10	10	100		10	100		70-130	0		20
1,4-Dichlorobenzene	ND	10	9.8	98		9.8	98		70-130	0		20
Methyl tert butyl ether	ND	10	8.3	83		8.4	84		70-130	1		20
p/m-Xylene	ND	20	18	90		18	90		70-130	0		20
o-Xylene	ND	20	18	90		18	90		70-130	0		20
cis-1,2-Dichloroethene	ND	10	7.9	79		8.0	80		70-130	1		20
Dibromomethane	ND	10	8.6	86		8.6	86		70-130	0		20
1,2,3-Trichloropropane	ND	10	12	120		12	120		70-130	0		20
Styrene	ND	20	18	90		18	90		70-130	0		20
Dichlorodifluoromethane	ND	10	7.7	77		7.9	79		70-130	3		20
Acetone	2.7J	10	12	120		13	130		70-130	8		20
Carbon disulfide	ND	10	8.0	80		7.6	76		70-130	5		20
Methyl ethyl ketone	ND	10	9.5	95		9.8	98		70-130	3		20
Methyl isobutyl ketone	ND	10	9.7	97		9.6	96		70-130	1		20
2-Hexanone	ND	10	10	100		13	130		70-130	**26**	Q	20
Bromochloromethane	ND	10	8.0	80		7.7	77		70-130	4		20
Tetrahydrofuran	ND	10	9.0	90		9.2	92		70-130	2		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 10,12-14,17,19,21-24 QC Batch ID: WG1487906-6 WG1487906-7 QC Sample: L2117504-23 Client ID: HA-11-04072021												
2,2-Dichloropropane	ND	10	8.5	85		8.4	84		70-130	1		20
1,2-Dibromoethane	ND	10	9.8	98		9.8	98		70-130	0		20
1,3-Dichloropropane	ND	10	10	100		10	100		70-130	0		20
1,1,1,2-Tetrachloroethane	ND	10	9.8	98		9.8	98		70-130	0		20
Bromobenzene	ND	10	10	100		10	100		70-130	0		20
n-Butylbenzene	ND	10	9.7	97		9.6	96		70-130	1		20
sec-Butylbenzene	ND	10	10	100		10	100		70-130	0		20
tert-Butylbenzene	ND	10	9.7	97		9.6	96		70-130	1		20
o-Chlorotoluene	ND	10	11	110		11	110		70-130	0		20
p-Chlorotoluene	ND	10	10	100		11	110		70-130	10		20
1,2-Dibromo-3-chloropropane	ND	10	10	100		10	100		70-130	0		20
Hexachlorobutadiene	ND	10	8.2	82		7.4	74		70-130	10		20
Isopropylbenzene	ND	10	11	110		11	110		70-130	0		20
p-Isopropyltoluene	2.7	10	12	93		14	113		70-130	15		20
Naphthalene	ND	10	10	100		10	100		70-130	0		20
n-Propylbenzene	ND	10	10	100		10	100		70-130	0		20
1,2,3-Trichlorobenzene	ND	10	10	100		10	100		70-130	0		20
1,2,4-Trichlorobenzene	ND	10	9.1	91		9.3	93		70-130	2		20
1,3,5-Trimethylbenzene	ND	10	9.9	99		10	100		70-130	1		20
1,2,4-Trimethylbenzene	ND	10	10	100		10	100		70-130	0		20
Diethyl ether	ND	10	8.2	82		8.1	81		70-130	1		20
Diisopropyl Ether	ND	10	8.8	88		8.9	89		70-130	1		20
Ethyl-Tert-Butyl-Ether	ND	10	8.5	85		8.6	86		70-130	1		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 10,12-14,17,19,21-24 QC Batch ID: WG1487906-6 WG1487906-7 QC Sample: L2117504-23 Client ID: HA-11-04072021												
Tertiary-Amyl Methyl Ether	ND	10	8.3	83		8.3	83		70-130	0		20
1,4-Dioxane	ND	500	390	78		380	76		70-130	3		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		109		70-130
4-Bromofluorobenzene	109		113		70-130
Dibromofluoromethane	99		97		70-130
Toluene-d8	109		109		70-130

SEMIVOLATILES

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-01	Date Collected:	04/06/21 17:20
Client ID:	MW-S62A-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/12/21 08:01
Analytical Date:	04/14/21 22:31		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-01	Date Collected:	04/06/21 17:20
Client ID:	MW-S62A-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	41		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	41		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-01
Client ID: MW-S62A-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 17:20
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 02:14
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.08	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.10	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.06	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.15		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.05	J	ug/l	0.10	0.01	1
Chrysene	0.09	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.07	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.08	J	ug/l	0.10	0.01	1
Pyrene	0.06	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-01	Date Collected:	04/06/21 17:20
Client ID:	MW-S62A-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	37		15-110
4-Terphenyl-d14	72		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-01
Client ID: MW-S62A-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 17:20
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 22:02
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 20:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.117	J	ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	55		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-03	Date Collected:	04/06/21 17:10
Client ID:	MW-BS28-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/12/21 23:52
Analytical Date:	04/14/21 22:54		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-03	Date Collected:	04/06/21 17:10
Client ID:	MW-BS28-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	55		15-110
4-Terphenyl-d14	70		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-03
Client ID: MW-BS28-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 17:10
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/14/21 23:27
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.11	B	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	10	B	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.07	J	ug/l	0.10	0.01	1
Phenanthrene	0.07	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	2.3	B	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-03	Date Collected:	04/06/21 17:10
Client ID:	MW-BS28-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	94		30-130
2,4,6-Tribromophenol	58		15-110
4-Terphenyl-d14	91		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-03	Date Collected:	04/06/21 17:10
Client ID:	MW-BS28-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 20:15
Analytical Date:	04/20/21 22:23		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	31.6		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-03 RE
Client ID: MW-BS28-04062021
Sample Location: CONCORD, MA

Date Collected: 04/06/21 17:10
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 10:13
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-03 RE	Date Collected:	04/06/21 17:10
Client ID:	MW-BS28-04062021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	108		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	107		15-110
4-Terphenyl-d14	104		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-04
Client ID: MW-BS17-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 23:17
Analyst: WR
Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-04 Date Collected: 04/07/21 09:30

Client ID: MW-BS17-04072021 Date Received: 04/07/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	71		30-130
2,4,6-Tribromophenol	48		15-110
4-Terphenyl-d14	71		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-04	Date Collected:	04/07/21 09:30
Client ID:	MW-BS17-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 23:52
Analytical Date:	04/14/21 23:45		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.13	B	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.04	JB	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-04	Date Collected:	04/07/21 09:30
Client ID:	MW-BS17-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	45		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-04
Client ID: MW-BS17-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 17:58
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 16:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.813		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-04 RE
Client ID: MW-BS17-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 10:33
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-04 RE	Date Collected:	04/07/21 09:30
Client ID:	MW-BS17-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	100		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	99		15-110
4-Terphenyl-d14	102		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-05
Client ID: MW-SD62A-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/14/21 23:39
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-05 Date Collected: 04/07/21 09:30

Client ID: MW-SD62A-04072021 Date Received: 04/07/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	61		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-05
Client ID: MW-SD62A-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 00:04
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-05	Date Collected:	04/07/21 09:30
Client ID:	MW-SD62A-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	72		30-130
2-Fluorobiphenyl	87		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	78		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-05	Date Collected:	04/07/21 09:30
Client ID:	MW-SD62A-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 18:19		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.204		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-06	Date Collected:	04/07/21 09:55
Client ID:	HB-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/12/21 23:52
Analytical Date:	04/15/21 00:02		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-06	Date Collected:	04/07/21 09:55
Client ID:	HB-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	76		15-110
4-Terphenyl-d14	71		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-06	Date Collected:	04/07/21 09:55
Client ID:	HB-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 23:52
Analytical Date:	04/15/21 00:22		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-06	Date Collected:	04/07/21 09:55
Client ID:	HB-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	80		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-06
Client ID: HB-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:55
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 18:40
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 16:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.417		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-07
Client ID: HA20-CMT-1S-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 10:20
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 00:25
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-07	Date Collected:	04/07/21 10:20
Client ID:	HA20-CMT-1S-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	44		15-110
4-Terphenyl-d14	80		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-07	Date Collected:	04/07/21 10:20
Client ID:	HA20-CMT-1S-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 23:52
Analytical Date:	04/15/21 00:41		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-07	Date Collected:	04/07/21 10:20
Client ID:	HA20-CMT-1S-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	41		15-110
4-Terphenyl-d14	86		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-07	Date Collected:	04/07/21 10:20
Client ID:	HA20-CMT-1S-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 19:01		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-08
Client ID: MW-BS39-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:00
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 00:47
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-08	Date Collected:	04/07/21 11:00
Client ID:	MW-BS39-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		15-110
Phenol-d6	62		15-110
Nitrobenzene-d5	90		30-130
2-Fluorobiphenyl	81		30-130
2,4,6-Tribromophenol	72		15-110
4-Terphenyl-d14	82		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504

Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-08
Client ID: MW-BS39-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:00
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 00:59
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.30	B	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.09	JB	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-08	Date Collected:	04/07/21 11:00
Client ID:	MW-BS39-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	62		15-110
Nitrobenzene-d5	85		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	65		15-110
4-Terphenyl-d14	93		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-08	Date Collected:	04/07/21 11:00
Client ID:	MW-BS39-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 19:22		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	98		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-08 RE	Date Collected:	04/07/21 11:00
Client ID:	MW-BS39-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:54
Analytical Date:	04/22/21 10:53		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.18		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	1.3		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.20		ug/l	0.10	0.01	1
Phenanthrene	0.32		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.40		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-08 RE	Date Collected:	04/07/21 11:00
Client ID:	MW-BS39-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	104		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	106		15-110
4-Terphenyl-d14	94		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-09
Client ID: MW-S14-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:00
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 01:10
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-09	Date Collected:	04/07/21 11:00
Client ID:	MW-S14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		15-110
Phenol-d6	62		15-110
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	78		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-09	Date Collected:	04/07/21 11:00
Client ID:	MW-S14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 23:52
Analytical Date:	04/15/21 01:18		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-09	Date Collected:	04/07/21 11:00
Client ID:	MW-S14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	58		15-110
Nitrobenzene-d5	72		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	82		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-09	Date Collected:	04/07/21 11:00
Client ID:	MW-S14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 19:43		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-10
Client ID: MW-SD63-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 01:33
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 23:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-10	Date Collected:	04/07/21 11:30
Client ID:	MW-SD63-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	61		15-110
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	72		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-10	Date Collected:	04/07/21 11:30
Client ID:	MW-SD63-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 23:52
Analytical Date:	04/15/21 01:37		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.02	JB	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	JB	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-10	Date Collected:	04/07/21 11:30
Client ID:	MW-SD63-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		15-110
Phenol-d6	71		15-110
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	83		30-130
2,4,6-Tribromophenol	68		15-110
4-Terphenyl-d14	90		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-10
Client ID: MW-SD63-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 11:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 20:04
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/13/21 16:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0764	J	ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-11
Client ID: MW-BS12-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/11/21 02:43
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 04/09/21 03:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.373	J	ng/l	1.74	0.355	1
Perfluoropentanoic Acid (PFPeA)	1.01	J	ng/l	1.74	0.345	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.74	0.207	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.74	0.394	1
Perfluorohexanoic Acid (PFHxA)	0.630	J	ng/l	1.74	0.286	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.74	0.213	1
Perfluoroheptanoic Acid (PFHpA)	1.14	J	ng/l	1.74	0.196	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.74	0.327	1
Perfluorooctanoic Acid (PFOA)	0.951	J	ng/l	1.74	0.205	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.74	1.16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.74	0.599	1
Perfluorononanoic Acid (PFNA)	0.550	J	ng/l	1.74	0.272	1
Perfluorooctanesulfonic Acid (PFOS)	0.609	J	ng/l	1.74	0.439	1
Perfluorodecanoic Acid (PFDA)	0.345	J	ng/l	1.74	0.265	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.74	1.06	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.74	0.975	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.74	0.564	1
Perfluoroundecanoic Acid (PFUnA)	0.300	J	ng/l	1.74	0.226	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.74	0.853	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.74	0.700	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.74	0.324	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.74	0.285	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.74	0.216	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	43.5	19.8	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.74	0.292	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.48	1.08	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.48	1.00	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-11	Date Collected:	04/07/21 11:30
Client ID:	MW-BS12-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.74	0.536	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.35	1.76	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.74	0.241	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.74	0.255	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	83		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**57**	Q	62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	90		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**146**	Q	12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	69		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	80		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	114		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**224**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	74		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	84		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**197**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	74		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	86		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	80		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	107		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	106		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	70		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	70		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-11	Date Collected:	04/07/21 11:30
Client ID:	MW-BS12-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:42
Analytical Date:	04/17/21 20:45		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.74	0.505	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.4	6.41	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.4	5.78	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	43.5	19.3	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	43.5	19.6	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	66		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	35		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	29		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	47		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	42		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-11
Client ID: MW-BS12-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 01:56
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-11	Date Collected:	04/07/21 11:30
Client ID:	MW-BS12-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	58		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-11
Client ID: MW-BS12-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 03:13
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.03	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.06	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	0.04	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.03	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.03	J	ug/l	0.10	0.01	1
Pyrene	0.03	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-11	Date Collected:	04/07/21 11:30
Client ID:	MW-BS12-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	65		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	86		30-130
2,4,6-Tribromophenol	75		15-110
4-Terphenyl-d14	94		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-11	Date Collected:	04/07/21 11:30
Client ID:	MW-BS12-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 20:26		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.156	0.0781	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-12	Date Collected:	04/07/21 12:00
Client ID:	EQBLANK1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:45
Analytical Date:	04/11/21 02:59		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.74	0.355	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.74	0.345	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.74	0.207	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.74	0.394	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.74	0.286	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.74	0.213	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.74	0.196	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.74	0.327	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.74	0.205	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.74	1.16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.74	0.599	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.74	0.272	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.74	0.439	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.74	0.265	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.74	1.06	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.74	0.975	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.74	0.564	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.74	0.226	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.74	0.853	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.74	0.700	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.74	0.324	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.74	0.285	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.74	0.216	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	43.5	19.8	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.74	0.292	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.48	1.08	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.48	1.00	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-12	Date Collected:	04/07/21 12:00
Client ID:	EQBLANK1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.74	0.536	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.35	1.76	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.74	0.241	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.74	0.255	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	101		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	71		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	95		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**143**	Q	12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	83		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	93		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	115		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	95		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**196**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	85		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	101		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	96		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**208**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	93		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	100		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	104		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	112		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	119		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	106		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	74		10-206

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-12
Client ID: EQBLANK1-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 12:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/17/21 20:52
Analyst: SG
Extraction Method: ALPHA 23528
Extraction Date: 04/09/21 03:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.74	0.505	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.4	6.41	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.4	5.78	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	43.5	19.3	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	43.5	19.6	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	73		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	35		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	28		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	52		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	45		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-12
Client ID: EQBLANK1-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 12:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 05:30
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-12	Date Collected:	04/07/21 12:00
Client ID:	EQBLANK1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	47		30-130
2-Fluorobiphenyl	50		30-130
2,4,6-Tribromophenol	50		15-110
4-Terphenyl-d14	46		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-12
Client ID: EQBLANK1-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 12:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 03:31
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	0.02	J	ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-12	Date Collected:	04/07/21 12:00
Client ID:	EQBLANK1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	76		15-110
4-Terphenyl-d14	84		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-12
Client ID: EQBLANK1-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 12:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 20:49
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 16:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-13	Date Collected:	04/07/21 12:45
Client ID:	HA20-CMT-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 15:46
Analytical Date:	04/15/21 15:41		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-13
Client ID: HA20-CMT-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 12:45
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	93		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	93		15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-13
Client ID: HA20-CMT-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 12:45
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 06:05
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 15:53

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-13
Client ID: HA20-CMT-11-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 12:45
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	84		30-130
2,4,6-Tribromophenol	109		15-110
4-Terphenyl-d14	99		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-13	Date Collected:	04/07/21 12:45
Client ID:	HA20-CMT-11-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 21:11		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-14	Date Collected:	04/07/21 13:00
Client ID:	MW-SD02-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 08:13
Analytical Date:	04/15/21 17:35		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-14	Date Collected:	04/07/21 13:00
Client ID:	MW-SD02-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	48		30-130
2,4,6-Tribromophenol	54		15-110
4-Terphenyl-d14	51		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-14
Client ID: MW-SD02-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 13:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 03:50
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-14
Client ID: MW-SD02-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 13:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	73		15-110
4-Terphenyl-d14	87		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-14	Date Collected:	04/07/21 13:00
Client ID:	MW-SD02-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 21:34		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.147	J	ug/l	0.163	0.0815	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	55		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-15
Client ID: MW-SM46-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 13:30
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 05:55
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-15	Date Collected:	04/07/21 13:30
Client ID:	MW-SM46-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	63		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	69		15-110
4-Terphenyl-d14	58		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-15	Date Collected:	04/07/21 13:30
Client ID:	MW-SM46-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 08:19
Analytical Date:	04/16/21 04:09		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.13		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.03	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.05	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-15	Date Collected:	04/07/21 13:30
Client ID:	MW-SM46-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		15-110
Phenol-d6	70		15-110
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	87		30-130
2,4,6-Tribromophenol	97		15-110
4-Terphenyl-d14	106		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-15
Client ID: MW-SM46-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 13:30
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 21:56
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 16:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.537		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-16	Date Collected:	04/07/21 14:00
Client ID:	FIELD BLANK1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:46
Analytical Date:	04/11/21 03:16		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.88	0.384	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.88	0.373	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.88	0.224	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.88	0.426	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.88	0.309	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.88	0.231	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.88	0.212	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.88	0.354	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.88	0.222	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.88	1.26	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.88	0.648	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.88	0.294	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.88	0.475	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.88	0.286	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.88	1.14	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.88	1.06	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.88	0.610	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.88	0.245	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.88	0.923	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.88	0.758	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.88	0.350	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.88	0.308	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.88	0.234	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	47.1	21.4	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.88	0.316	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.77	1.17	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.77	1.08	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-16 Date Collected: 04/07/21 14:00
Client ID: FIELD BLANK1-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.88	0.580	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.71	1.90	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.88	0.261	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.88	0.276	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	102		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	72		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	95		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	141		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	82		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	93		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	116		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	95		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**190**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	86		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	102		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	96		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**207**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	109		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	103		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	113		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	117		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	120		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	99		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	74		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-16	Date Collected:	04/07/21 14:00
Client ID:	FIELD BLANK1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/09/21 03:46
Analytical Date:	04/17/21 20:59		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.88	0.546	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.8	6.93	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.8	6.26	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	47.1	20.9	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	47.1	21.2	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	29		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	24		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	43		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-17	Date Collected:	04/07/21 08:50
Client ID:	MW-S32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/12/21 23:52
Analytical Date:	04/15/21 02:18		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-17	Date Collected:	04/07/21 08:50
Client ID:	MW-S32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		15-110
Phenol-d6	71		15-110
Nitrobenzene-d5	87		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	70		15-110
4-Terphenyl-d14	76		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-17	Date Collected:	04/07/21 08:50
Client ID:	MW-S32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/12/21 23:52
Analytical Date:	04/15/21 01:55		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117504

Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-17	Date Collected:	04/07/21 08:50
Client ID:	MW-S32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		15-110
Phenol-d6	69		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	81		30-130
2,4,6-Tribromophenol	64		15-110
4-Terphenyl-d14	87		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-17	Date Collected:	04/07/21 08:50
Client ID:	MW-S32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 22:18		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.973		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-18
Client ID: MW-SD32-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 10:50
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 06:21
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-18	Date Collected:	04/07/21 10:50
Client ID:	MW-SD32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	56		30-130
2-Fluorobiphenyl	53		30-130
2,4,6-Tribromophenol	49		15-110
4-Terphenyl-d14	49		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-18
Client ID: MW-SD32-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 10:50
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 04:27
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-18	Date Collected:	04/07/21 10:50
Client ID:	MW-SD32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	66		15-110
4-Terphenyl-d14	82		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504

Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-18
Client ID: MW-SD32-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 10:50
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 22:40
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 16:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.533		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-19
Client ID: MW-BS32-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 14:10
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 06:47
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-19	Date Collected:	04/07/21 14:10
Client ID:	MW-BS32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	58		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	67		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-19
Client ID: MW-BS32-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 14:10
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 04:46
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.02	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.63		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.17		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-19	Date Collected:	04/07/21 14:10
Client ID:	MW-BS32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		15-110
Phenol-d6	73		15-110
Nitrobenzene-d5	90		30-130
2-Fluorobiphenyl	107		30-130
2,4,6-Tribromophenol	108		15-110
4-Terphenyl-d14	**137**	Q	30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-19	Date Collected:	04/07/21 14:10
Client ID:	MW-BS32-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 23:03		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	2.32		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-20	Date Collected:	04/07/21 14:15
Client ID:	MW-S63-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 08:13
Analytical Date:	04/15/21 07:12		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-20 Date Collected: 04/07/21 14:15

Client ID: MW-S63-04072021 Date Received: 04/07/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	66		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	82		15-110
4-Terphenyl-d14	63		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-20
Client ID: MW-S63-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 14:15
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 05:05
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.30		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.24		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-20	Date Collected:	04/07/21 14:15
Client ID:	MW-S63-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	89		15-110
Phenol-d6	78		15-110
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	100		30-130
2,4,6-Tribromophenol	**122**	Q	15-110
4-Terphenyl-d14	122		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-20	Date Collected:	04/07/21 14:15
Client ID:	MW-S63-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 23:25		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-21
Client ID: MW-BS14-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 13:55
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 07:38
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-21	Date Collected:	04/07/21 13:55
Client ID:	MW-BS14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	69		15-110
4-Terphenyl-d14	57		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-21
Client ID: MW-BS14-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 13:55
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 05:24
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.45		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.17		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-21	Date Collected:	04/07/21 13:55
Client ID:	MW-BS14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	86		30-130
2,4,6-Tribromophenol	90		15-110
4-Terphenyl-d14	100		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-21	Date Collected:	04/07/21 13:55
Client ID:	MW-BS14-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 16:30
Analytical Date:	04/19/21 23:48		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.83		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-22
Client ID: MW-SD24-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 15:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 08:04
Analyst: SZ
Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-22	Date Collected:	04/07/21 15:30
Client ID:	MW-SD24-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	56		30-130
2,4,6-Tribromophenol	60		15-110
4-Terphenyl-d14	58		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-22
Client ID: MW-SD24-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 15:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 05:42
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-22	Date Collected:	04/07/21 15:30
Client ID:	MW-SD24-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		15-110
Phenol-d6	65		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	89		30-130
2,4,6-Tribromophenol	85		15-110
4-Terphenyl-d14	107		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-22
Client ID: MW-SD24-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 15:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 00:10
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/13/21 16:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-23
Client ID: HA-11-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 15:40
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 16:04
Analyst: JG
Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-23 Date Collected: 04/07/21 15:40
Client ID: HA-11-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	60		30-130
2,4,6-Tribromophenol	64		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-23
Client ID: HA-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:40
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 09:15
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.03	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.04	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.04	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.05	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	0.03	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.04	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.05	J	ug/l	0.10	0.01	1
Pyrene	0.04	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.04	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-23
Client ID: HA-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:40
Date Received: 04/07/21
Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	95		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	110		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504

Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-23
Client ID: HA-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:40
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 00:32
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 16:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.156	0.0781	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-24	Date Collected:	04/07/21 16:00
Client ID:	HA20-CMT-1D1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 10:10
Analytical Date:	04/15/21 16:26		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-24
Client ID: HA20-CMT-1D1-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 16:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		15-110
Phenol-d6	70		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	**113**	Q	15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-24
Client ID: HA20-CMT-1D1-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 16:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 06:38
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 10:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.02	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.06	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.22		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	0.33		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.06	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.14		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.12		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID:	L2117504-24	Date Collected:	04/07/21 16:00
Client ID:	HA20-CMT-1D1-04072021	Date Received:	04/07/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	99		15-110
Phenol-d6	87		15-110
Nitrobenzene-d5	99		30-130
2-Fluorobiphenyl	102		30-130
2,4,6-Tribromophenol	**151**	Q	15-110
4-Terphenyl-d14	126		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-24
Client ID: HA20-CMT-1D1-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 16:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 02:30
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 16:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.212		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/10/21 22:34
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 04/09/21 03:42

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 11-12,16 Batch: WG1484163-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	1.65	J	ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	0.264	JF	ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2.46		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	0.376	J	ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/10/21 22:34	Extraction Date:	04/09/21 03:42
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 11-12,16 Batch: WG1484163-1					
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24
Perfluorooctadecanoic Acid (PFODA)	1.46	JF	ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/10/21 22:34	Extraction Date:	04/09/21 03:42
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 11-12,16 Batch: WG1484163-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	98		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	68		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	89		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	133		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	78		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	90		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	110		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**182**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	80		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	98		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	97		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**204**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	102		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	107		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	52		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	110		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	127		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	121		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	94		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	86		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/13/21 03:26	Extraction Date:	04/09/21 03:42
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 11-12,16 Batch: WG1484163-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	47		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	45		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	57		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	57		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/12/21 23:34
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG1485004-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/12/21 23:34
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG1485004-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/12/21 23:34
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG1485004-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	43		15-110
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	64		15-110
4-Terphenyl-d14	80		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 16:16
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 08:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01 Batch: WG1485070-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/15/21 16:16	Extraction Date:	04/12/21 08:00
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01 Batch: WG1485070-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	59		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/13/21 23:21
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 15:22

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03-10,17 Batch: WG1485277-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	3.3		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/13/21 23:21
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 15:22

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03-10,17 Batch: WG1485277-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	1.2	J	ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/13/21 23:21
Analyst: JG
Extraction Method: EPA 3510C
Extraction Date: 04/12/21 15:22

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03-10,17 Batch: WG1485277-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	52		15-110
4-Terphenyl-d14	69		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/13/21 23:46
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 15:25

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 03-10,17 Batch: WG1485279-1					
Acenaphthene	0.11		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	3.7		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	0.07	J	ug/l	0.10	0.01
Phenanthrene	0.10	J	ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	1.4		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/13/21 23:46
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 15:25

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 03-10,17 Batch: WG1485279-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	87		15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/13/21 20:23
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/12/21 20:15

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03 Batch: WG1485328-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/19/21 16:58	Extraction Date:	04/13/21 16:30
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 04-15,17-24 Batch: WG1485711-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	54		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/14/21 21:01
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 11-12,14-15,18-24 Batch: WG1486007-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/14/21 21:01	Extraction Date:	04/14/21 08:13
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 11-12,14-15,18-24 Batch: WG1486007-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/14/21 21:01	Extraction Date:	04/14/21 08:13
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 11-12,14-15,18-24 Batch: WG1486007-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	60		30-130
2,4,6-Tribromophenol	65		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 14:25
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 11-12,14-15,18-24 Batch: WG1486021-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/15/21 14:25	Extraction Date:	04/14/21 08:19
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 11-12,14-15,18-24 Batch: WG1486021-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		15-110
Phenol-d6	72		15-110
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	96		30-130
2,4,6-Tribromophenol	91		15-110
4-Terphenyl-d14	125		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/15/21 01:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:12

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 13 Batch: WG1486113-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/15/21 01:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:12

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 13 Batch: WG1486113-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/15/21 01:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:12

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 13 Batch: WG1486113-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	84		15-110
4-Terphenyl-d14	76		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 12:34
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:14

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 13 Batch: WG1486116-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 12:34
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:14

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 13 Batch: WG1486116-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	69		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	72		15-110
4-Terphenyl-d14	92		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 13:30
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 03-04,08 Batch: WG1488688-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 13:30
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 03-04,08 Batch: WG1488688-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	89		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	**113**	Q	15-110
4-Terphenyl-d14	78		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 Batch: WG1484163-2								
Perfluorobutanoic Acid (PFBA)	112		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	116		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	122		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	123		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	114		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	97		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	115		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	106		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	121		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	124		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	120		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	134		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	118		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	130		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	116		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	117		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	121		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	129		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	121		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	114		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	110		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	111		-		67-153	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 Batch: WG1484163-2								
Perfluorotridecanoic Acid (PFTrDA)	143		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	124		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	123		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	120		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	144		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	**229**	Q	-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	135		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	150		-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	86		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	74		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 Batch: WG1484163-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	95				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	66				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	87				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	136				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	88				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	107				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**174**	Q			14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	75				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	89				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**188**	Q			10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	94				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	91				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	54				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	101				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	105				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	108				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	90				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	73				10-206

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 Batch: WG1484163-2								
Perfluorooctanesulfonamide (FOSA)	102		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	125		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	122		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	124		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	119		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	63				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	46				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	44				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	52				10-187

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1485004-2 WG1485004-3								
Acenaphthene	67		64		40-140	5		20
1,2,4-Trichlorobenzene	58		54		40-140	7		20
Hexachlorobenzene	67		65		40-140	3		20
Bis(2-chloroethyl)ether	69		66		40-140	4		20
2-Chloronaphthalene	63		60		40-140	5		20
1,2-Dichlorobenzene	60		54		40-140	11		20
1,3-Dichlorobenzene	56		52		40-140	7		20
1,4-Dichlorobenzene	57		52		40-140	9		20
3,3'-Dichlorobenzidine	56		57		40-140	2		20
2,4-Dinitrotoluene	75		76		40-140	1		20
2,6-Dinitrotoluene	72		76		40-140	5		20
Azobenzene	68		67		40-140	1		20
Fluoranthene	71		69		40-140	3		20
4-Bromophenyl phenyl ether	69		68		40-140	1		20
Bis(2-chloroisopropyl)ether	71		68		40-140	4		20
Bis(2-chloroethoxy)methane	71		69		40-140	3		20
Hexachlorobutadiene	50		46		40-140	8		20
Hexachloroethane	54		49		40-140	10		20
Isophorone	66		66		40-140	0		20
Naphthalene	61		59		40-140	3		20
Nitrobenzene	78		74		40-140	5		20
Bis(2-ethylhexyl)phthalate	71		72		40-140	1		20
Butyl benzyl phthalate	69		73		40-140	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1485004-2 WG1485004-3								
Di-n-butylphthalate	65		67		40-140	3		20
Di-n-octylphthalate	68		69		40-140	1		20
Diethyl phthalate	70		71		40-140	1		20
Dimethyl phthalate	71		70		40-140	1		20
Benzo(a)anthracene	75		70		40-140	7		20
Benzo(a)pyrene	74		67		40-140	10		20
Benzo(b)fluoranthene	78		73		40-140	7		20
Benzo(k)fluoranthene	71		64		40-140	10		20
Chrysene	75		70		40-140	7		20
Acenaphthylene	63		62		40-140	2		20
Anthracene	73		67		40-140	9		20
Benzo(ghi)perylene	77		68		40-140	12		20
Fluorene	69		66		40-140	4		20
Phenanthrene	71		66		40-140	7		20
Dibenzo(a,h)anthracene	78		69		40-140	12		20
Indeno(1,2,3-cd)pyrene	78		71		40-140	9		20
Pyrene	68		67		40-140	1		20
Aniline	42		**37**	Q	40-140	13		20
4-Chloroaniline	52		57		40-140	9		20
Dibenzofuran	67		63		40-140	6		20
2-Methylnaphthalene	60		58		40-140	3		20
Acetophenone	70		68		40-140	3		20
2,4,6-Trichlorophenol	70		70		30-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1485004-2 WG1485004-3								
2-Chlorophenol	71		68		30-130	4		20
2,4-Dichlorophenol	76		75		30-130	1		20
2,4-Dimethylphenol	70		64		30-130	9		20
2-Nitrophenol	88		87		30-130	1		20
4-Nitrophenol	64		65		30-130	2		20
2,4-Dinitrophenol	88		94		30-130	7		20
Pentachlorophenol	73		80		30-130	9		20
Phenol	50		48		30-130	4		20
2-Methylphenol	68		65		30-130	5		20
3-Methylphenol/4-Methylphenol	70		67		30-130	4		20
2,4,5-Trichlorophenol	72		74		30-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	60		59		15-110
Phenol-d6	49		49		15-110
Nitrobenzene-d5	78		75		30-130
2-Fluorobiphenyl	67		64		30-130
2,4,6-Tribromophenol	79		78		15-110
4-Terphenyl-d14	66		65		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01 Batch: WG1485070-2 WG1485070-3								
Acenaphthene	77		70		40-140	10		20
2-Chloronaphthalene	77		68		40-140	12		20
Fluoranthene	85		79		40-140	7		20
Hexachlorobutadiene	74		65		40-140	13		20
Naphthalene	78		70		40-140	11		20
Benzo(a)anthracene	79		72		40-140	9		20
Benzo(a)pyrene	85		79		40-140	7		20
Benzo(b)fluoranthene	83		80		40-140	4		20
Benzo(k)fluoranthene	91		83		40-140	9		20
Chrysene	81		76		40-140	6		20
Acenaphthylene	82		72		40-140	13		20
Anthracene	81		75		40-140	8		20
Benzo(ghi)perylene	83		76		40-140	9		20
Fluorene	80		72		40-140	11		20
Phenanthrene	79		74		40-140	7		20
Dibenzo(a,h)anthracene	87		80		40-140	8		20
Indeno(1,2,3-cd)pyrene	84		78		40-140	7		20
Pyrene	85		79		40-140	7		20
2-Methylnaphthalene	79		70		40-140	12		20
Pentachlorophenol	69		56		30-130	**21**	Q	20
Hexachlorobenzene	77		71		40-140	8		20
Hexachloroethane	73		63		40-140	15		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01 Batch: WG1485070-2 WG1485070-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	63		56		15-110
Phenol-d6	54		49		15-110
Nitrobenzene-d5	76		66		30-130
2-Fluorobiphenyl	77		67		30-130
2,4,6-Tribromophenol	83		75		15-110
4-Terphenyl-d14	87		80		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03-10,17 Batch: WG1485277-2 WG1485277-3								
Acenaphthene	69		83		40-140	18		20
1,2,4-Trichlorobenzene	64		72		40-140	12		20
Hexachlorobenzene	65		80		40-140	**21**	Q	20
Bis(2-chloroethyl)ether	70		76		40-140	8		20
2-Chloronaphthalene	66		80		40-140	19		20
1,2-Dichlorobenzene	64		70		40-140	9		20
1,3-Dichlorobenzene	61		69		40-140	12		20
1,4-Dichlorobenzene	62		70		40-140	12		20
3,3'-Dichlorobenzidine	46		46		40-140	0		20
2,4-Dinitrotoluene	72		90		40-140	**22**	Q	20
2,6-Dinitrotoluene	72		95		40-140	**28**	Q	20
Azobenzene	70		86		40-140	**21**	Q	20
Fluoranthene	67		86		40-140	**25**	Q	20
4-Bromophenyl phenyl ether	68		84		40-140	**21**	Q	20
Bis(2-chloroisopropyl)ether	73		82		40-140	12		20
Bis(2-chloroethoxy)methane	71		79		40-140	11		20
Hexachlorobutadiene	61		74		40-140	19		20
Hexachloroethane	64		72		40-140	12		20
Isophorone	68		77		40-140	12		20
Naphthalene	63		79		40-140	**23**	Q	20
Nitrobenzene	76		87		40-140	13		20
Bis(2-ethylhexyl)phthalate	81		104		40-140	**25**	Q	20
Butyl benzyl phthalate	72		94		40-140	**27**	Q	20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03-10,17 Batch: WG1485277-2 WG1485277-3								
Di-n-butylphthalate	70		92		40-140	**27**	Q	20
Di-n-octylphthalate	77		101		40-140	**27**	Q	20
Diethyl phthalate	70		91		40-140	**26**	Q	20
Dimethyl phthalate	69		87		40-140	**23**	Q	20
Benzo(a)anthracene	72		88		40-140	20		20
Benzo(a)pyrene	65		82		40-140	**23**	Q	20
Benzo(b)fluoranthene	67		85		40-140	**24**	Q	20
Benzo(k)fluoranthene	68		87		40-140	**25**	Q	20
Chrysene	71		86		40-140	19		20
Acenaphthylene	63		79		40-140	**23**	Q	20
Anthracene	69		86		40-140	**22**	Q	20
Benzo(ghi)perylene	69		88		40-140	**24**	Q	20
Fluorene	67		82		40-140	20		20
Phenanthrene	68		84		40-140	**21**	Q	20
Dibenzo(a,h)anthracene	72		89		40-140	**21**	Q	20
Indeno(1,2,3-cd)pyrene	69		86		40-140	**22**	Q	20
Pyrene	64		82		40-140	**25**	Q	20
Aniline	**31**	Q	**25**	Q	40-140	**21**	Q	20
4-Chloroaniline	**34**	Q	40		40-140	16		20
Dibenzofuran	66		81		40-140	20		20
2-Methylnaphthalene	64		78		40-140	20		20
Acetophenone	70		78		40-140	11		20
2,4,6-Trichlorophenol	69		88		30-130	**24**	Q	20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03-10,17 Batch: WG1485277-2 WG1485277-3								
2-Chlorophenol	68		77		30-130	12		20
2,4-Dichlorophenol	74		86		30-130	15		20
2,4-Dimethylphenol	61		70		30-130	14		20
2-Nitrophenol	90		103		30-130	13		20
4-Nitrophenol	58		80		30-130	**32**	Q	20
2,4-Dinitrophenol	78		106		30-130	**30**	Q	20
Pentachlorophenol	70		95		30-130	**30**	Q	20
Phenol	45		50		30-130	11		20
2-Methylphenol	61		69		30-130	12		20
3-Methylphenol/4-Methylphenol	65		72		30-130	10		20
2,4,5-Trichlorophenol	71		90		30-130	**24**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	55		62		15-110
Phenol-d6	45		51		15-110
Nitrobenzene-d5	78		87		30-130
2-Fluorobiphenyl	66		80		30-130
2,4,6-Tribromophenol	75		95		15-110
4-Terphenyl-d14	65		85		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Lab Number: L2117504
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 03-10,17 Batch: WG1485279-2 WG1485279-3								
Acenaphthene	80		69		40-140	15		20
2-Chloronaphthalene	84		72		40-140	15		20
Fluoranthene	95		85		40-140	11		20
Hexachlorobutadiene	89		75		40-140	17		20
Naphthalene	76		65		40-140	16		20
Benzo(a)anthracene	86		78		40-140	10		20
Benzo(a)pyrene	86		77		40-140	11		20
Benzo(b)fluoranthene	94		81		40-140	15		20
Benzo(k)fluoranthene	91		86		40-140	6		20
Chrysene	90		80		40-140	12		20
Acenaphthylene	84		72		40-140	15		20
Anthracene	81		71		40-140	13		20
Benzo(ghi)perylene	83		75		40-140	10		20
Fluorene	87		76		40-140	13		20
Phenanthrene	82		73		40-140	12		20
Dibenzo(a,h)anthracene	88		80		40-140	10		20
Indeno(1,2,3-cd)pyrene	84		75		40-140	11		20
Pyrene	97		87		40-140	11		20
2-Methylnaphthalene	80		68		40-140	16		20
Pentachlorophenol	75		70		30-130	7		20
Hexachlorobenzene	87		90		40-140	3		20
Hexachloroethane	73		62		40-140	16		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS | **Lab Number:** L2117504

Project Number: 3252H | **Report Date:** 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 03-10,17 Batch: WG1485279-2 WG1485279-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	53		45		15-110
Phenol-d6	49		42		15-110
Nitrobenzene-d5	114		96		30-130
2-Fluorobiphenyl	85		71		30-130
2,4,6-Tribromophenol	**117**	Q	101		15-110
4-Terphenyl-d14	107		94		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01,03 Batch: WG1485328-2 WG1485328-3								
1,4-Dioxane	114		115		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	49		51		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2117504

Project Number: 3252H **Report Date:** 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 04-15,17-24 Batch: WG1485711-2 WG1485711-3								
1,4-Dioxane	104		110		40-140	6		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	51		53		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 11-12,14-15,18-24 Batch: WG1486007-2 WG1486007-3								
Acenaphthene	61		74		40-140	19		20
1,2,4-Trichlorobenzene	58		69		40-140	17		20
Hexachlorobenzene	65		74		40-140	13		20
Bis(2-chloroethyl)ether	60		73		40-140	20		20
2-Chloronaphthalene	64		76		40-140	17		20
1,2-Dichlorobenzene	54		66		40-140	20		20
1,3-Dichlorobenzene	53		65		40-140	20		20
1,4-Dichlorobenzene	52		65		40-140	**22**	Q	20
3,3'-Dichlorobenzidine	**27**	Q	59		40-140	**74**	Q	20
2,4-Dinitrotoluene	75		86		40-140	14		20
2,6-Dinitrotoluene	81		96		40-140	17		20
Azobenzene	68		79		40-140	15		20
Fluoranthene	65		77		40-140	17		20
4-Bromophenyl phenyl ether	67		78		40-140	15		20
Bis(2-chloroisopropyl)ether	63		78		40-140	**21**	Q	20
Bis(2-chloroethoxy)methane	66		78		40-140	17		20
Hexachlorobutadiene	52		65		40-140	**22**	Q	20
Hexachloroethane	54		68		40-140	**23**	Q	20
Isophorone	63		76		40-140	19		20
Naphthalene	56		71		40-140	**24**	Q	20
Nitrobenzene	68		87		40-140	**25**	Q	20
Bis(2-ethylhexyl)phthalate	80		91		40-140	13		20
Butyl benzyl phthalate	81		93		40-140	14		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 11-12,14-15,18-24 Batch: WG1486007-2 WG1486007-3								
Di-n-butylphthalate	70		80		40-140	13		20
Di-n-octylphthalate	82		90		40-140	9		20
Diethyl phthalate	72		83		40-140	14		20
Dimethyl phthalate	75		84		40-140	11		20
Benzo(a)anthracene	66		76		40-140	14		20
Benzo(a)pyrene	63		74		40-140	16		20
Benzo(b)fluoranthene	66		79		40-140	18		20
Benzo(k)fluoranthene	63		71		40-140	12		20
Chrysene	62		73		40-140	16		20
Acenaphthylene	65		76		40-140	16		20
Anthracene	62		76		40-140	20		20
Benzo(ghi)perylene	61		73		40-140	18		20
Fluorene	63		75		40-140	17		20
Phenanthrene	61		74		40-140	19		20
Dibenzo(a,h)anthracene	62		74		40-140	18		20
Indeno(1,2,3-cd)pyrene	62		74		40-140	18		20
Pyrene	63		74		40-140	16		20
Aniline	**16**	Q	**39**	Q	40-140	**84**	Q	20
4-Chloroaniline	**30**	Q	41		40-140	**31**	Q	20
Dibenzofuran	61		72		40-140	17		20
2-Methylnaphthalene	60		73		40-140	20		20
Acetophenone	61		76		40-140	**22**	Q	20
2,4,6-Trichlorophenol	73		86		30-130	16		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 11-12,14-15,18-24 Batch: WG1486007-2 WG1486007-3								
2-Chlorophenol	60		78		30-130	**26**	Q	20
2,4-Dichlorophenol	75		88		30-130	16		20
2,4-Dimethylphenol	52		73		30-130	**34**	Q	20
2-Nitrophenol	83		106		30-130	**24**	Q	20
4-Nitrophenol	72		80		30-130	11		20
2,4-Dinitrophenol	85		77		30-130	10		20
Pentachlorophenol	80		77		30-130	4		20
Phenol	43		58		30-130	**30**	Q	20
2-Methylphenol	59		75		30-130	**24**	Q	20
3-Methylphenol/4-Methylphenol	64		79		30-130	**21**	Q	20
2,4,5-Trichlorophenol	78		88		30-130	12		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	64		79		15-110
Phenol-d6	53		69		15-110
Nitrobenzene-d5	69		84		30-130
2-Fluorobiphenyl	62		71		30-130
2,4,6-Tribromophenol	92		102		15-110
4-Terphenyl-d14	64		72		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 11-12,14-15,18-24 Batch: WG1486021-2 WG1486021-3								
Acenaphthene	116		110		40-140	5		20
2-Chloronaphthalene	110		104		40-140	6		20
Fluoranthene	133		131		40-140	2		20
Hexachlorobutadiene	98		93		40-140	5		20
Naphthalene	102		97		40-140	5		20
Benzo(a)anthracene	124		124		40-140	0		20
Benzo(a)pyrene	136		133		40-140	2		20
Benzo(b)fluoranthene	136		135		40-140	1		20
Benzo(k)fluoranthene	**141**	Q	138		40-140	2		20
Chrysene	126		126		40-140	0		20
Acenaphthylene	119		113		40-140	5		20
Anthracene	127		125		40-140	2		20
Benzo(ghi)perylene	126		127		40-140	1		20
Fluorene	122		117		40-140	4		20
Phenanthrene	123		121		40-140	2		20
Dibenzo(a,h)anthracene	135		134		40-140	1		20
Indeno(1,2,3-cd)pyrene	132		132		40-140	0		20
Pyrene	134		132		40-140	2		20
2-Methylnaphthalene	110		105		40-140	5		20
Pentachlorophenol	91		92		30-130	1		20
Hexachlorobenzene	121		116		40-140	4		20
Hexachloroethane	91		87		40-140	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 11-12,14-15,18-24 Batch: WG1486021-2 WG1486021-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	100		92		15-110
Phenol-d6	89		83		15-110
Nitrobenzene-d5	102		97		30-130
2-Fluorobiphenyl	110		103		30-130
2,4,6-Tribromophenol	**127**	Q	**121**	Q	15-110
4-Terphenyl-d14	**137**	Q	**134**	Q	30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 13 Batch: WG1486113-2 WG1486113-3								
Acenaphthene	76		91		40-140	18		20
1,2,4-Trichlorobenzene	75		93		40-140	**21**	Q	20
Hexachlorobenzene	91		102		40-140	11		20
Bis(2-chloroethyl)ether	73		92		40-140	**23**	Q	20
2-Chloronaphthalene	79		106		40-140	**29**	Q	20
1,2-Dichlorobenzene	72		98		40-140	**31**	Q	20
1,3-Dichlorobenzene	71		88		40-140	**21**	Q	20
1,4-Dichlorobenzene	71		87		40-140	20		20
3,3'-Dichlorobenzidine	61		78		40-140	**24**	Q	20
2,4-Dinitrotoluene	93		104		40-140	11		20
2,6-Dinitrotoluene	86		110		40-140	**24**	Q	20
Azobenzene	86		101		40-140	16		20
Fluoranthene	88		92		40-140	4		20
4-Bromophenyl phenyl ether	90		102		40-140	13		20
Bis(2-chloroisopropyl)ether	62		84		40-140	**30**	Q	20
Bis(2-chloroethoxy)methane	73		84		40-140	14		20
Hexachlorobutadiene	78		99		40-140	**24**	Q	20
Hexachloroethane	74		98		40-140	**28**	Q	20
Isophorone	76		101		40-140	**28**	Q	20
Naphthalene	75		89		40-140	17		20
Nitrobenzene	72		109		40-140	**41**	Q	20
Bis(2-ethylhexyl)phthalate	76		84		40-140	10		20
Butyl benzyl phthalate	84		88		40-140	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 13 Batch: WG1486113-2 WG1486113-3								
Di-n-butylphthalate	81		84		40-140	4		20
Di-n-octylphthalate	76		88		40-140	15		20
Diethyl phthalate	94		105		40-140	11		20
Dimethyl phthalate	95		119		40-140	**22**	Q	20
Benzo(a)anthracene	87		95		40-140	9		20
Benzo(a)pyrene	105		120		40-140	13		20
Benzo(b)fluoranthene	90		102		40-140	13		20
Benzo(k)fluoranthene	98		109		40-140	11		20
Chrysene	93		105		40-140	12		20
Acenaphthylene	80		105		40-140	**27**	Q	20
Anthracene	88		100		40-140	13		20
Benzo(ghi)perylene	102		118		40-140	15		20
Fluorene	84		102		40-140	19		20
Phenanthrene	86		97		40-140	12		20
Dibenzo(a,h)anthracene	106		110		40-140	4		20
Indeno(1,2,3-cd)pyrene	105		102		40-140	3		20
Pyrene	87		91		40-140	4		20
Aniline	**32**	Q	**35**	Q	40-140	9		20
4-Chloroaniline	63		62		40-140	2		20
Dibenzofuran	80		99		40-140	**21**	Q	20
2-Methylnaphthalene	76		105		40-140	**32**	Q	20
Acetophenone	81		105		40-140	**26**	Q	20
2,4,6-Trichlorophenol	85		108		30-130	**24**	Q	20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 13 Batch: WG1486113-2 WG1486113-3								
2-Chlorophenol	78		104		30-130	**29**	Q	20
2,4-Dichlorophenol	82		110		30-130	**29**	Q	20
2,4-Dimethylphenol	72		74		30-130	3		20
2-Nitrophenol	84		113		30-130	**29**	Q	20
4-Nitrophenol	95		106		30-130	11		20
2,4-Dinitrophenol	83		100		30-130	19		20
Pentachlorophenol	78		93		30-130	18		20
Phenol	59		67		30-130	13		20
2-Methylphenol	74		94		30-130	**24**	Q	20
3-Methylphenol/4-Methylphenol	82		104		30-130	**24**	Q	20
2,4,5-Trichlorophenol	87		118		30-130	**30**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	82		**111**	Q	15-110
Phenol-d6	69		77		15-110
Nitrobenzene-d5	74		105		30-130
2-Fluorobiphenyl	78		102		30-130
2,4,6-Tribromophenol	109		**129**	Q	15-110
4-Terphenyl-d14	81		84		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 13 Batch: WG1486116-2 WG1486116-3								
Acenaphthene	92		83		40-140	10		20
2-Chloronaphthalene	88		79		40-140	11		20
Fluoranthene	105		93		40-140	12		20
Hexachlorobutadiene	82		74		40-140	10		20
Naphthalene	85		75		40-140	13		20
Benzo(a)anthracene	96		90		40-140	6		20
Benzo(a)pyrene	102		94		40-140	8		20
Benzo(b)fluoranthene	103		99		40-140	4		20
Benzo(k)fluoranthene	111		96		40-140	14		20
Chrysene	104		91		40-140	13		20
Acenaphthylene	92		84		40-140	9		20
Anthracene	101		90		40-140	12		20
Benzo(ghi)perylene	101		93		40-140	8		20
Fluorene	95		87		40-140	9		20
Phenanthrene	98		88		40-140	11		20
Dibenzo(a,h)anthracene	106		96		40-140	10		20
Indeno(1,2,3-cd)pyrene	99		92		40-140	7		20
Pyrene	106		94		40-140	12		20
2-Methylnaphthalene	89		80		40-140	11		20
Pentachlorophenol	71		56		30-130	**24**	Q	20
Hexachlorobenzene	96		86		40-140	11		20
Hexachloroethane	76		69		40-140	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 13 Batch: WG1486116-2 WG1486116-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	77		70		15-110
Phenol-d6	67		61		15-110
Nitrobenzene-d5	81		73		30-130
2-Fluorobiphenyl	88		79		30-130
2,4,6-Tribromophenol	106		91		15-110
4-Terphenyl-d14	110		98		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2117504
Project Number: 3252H
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 03-04,08 Batch: WG1488688-2 WG1488688-3								
Acenaphthene	73		78		40-140	7		20
2-Chloronaphthalene	71		76		40-140	7		20
Fluoranthene	78		80		40-140	3		20
Hexachlorobutadiene	70		78		40-140	11		20
Naphthalene	68		84		40-140	**21**	Q	20
Benzo(a)anthracene	72		77		40-140	7		20
Benzo(a)pyrene	75		78		40-140	4		20
Benzo(b)fluoranthene	81		77		40-140	5		20
Benzo(k)fluoranthene	78		84		40-140	7		20
Chrysene	82		84		40-140	2		20
Acenaphthylene	73		78		40-140	7		20
Anthracene	74		76		40-140	3		20
Benzo(ghi)perylene	75		80		40-140	6		20
Fluorene	77		86		40-140	11		20
Phenanthrene	74		77		40-140	4		20
Dibenzo(a,h)anthracene	77		84		40-140	9		20
Indeno(1,2,3-cd)pyrene	73		78		40-140	7		20
Pyrene	80		81		40-140	1		20
2-Methylnaphthalene	69		77		40-140	11		20
Pentachlorophenol	87		97		30-130	11		20
Hexachlorobenzene	75		76		40-140	1		20
Hexachloroethane	64		73		40-140	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2117504

Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 03-04,08 Batch: WG1488688-2 WG1488688-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	72		103		15-110
Phenol-d6	63		89		15-110
Nitrobenzene-d5	96		107		30-130
2-Fluorobiphenyl	70		77		30-130
2,4,6-Tribromophenol	106		109		15-110
4-Terphenyl-d14	83		84		30-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 QC Batch ID: WG1484163-3 QC Sample: L2116995-08 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	0.548J	36.4	41.4	112		-	-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	2.93	36.4	45.9	118		-	-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	0.616J	32.3	41.2	126		-	-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	34.1	41.9	123		-	-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	1.97	36.4	45.8	120		-	-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	34.2	34.0	99		-	-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	0.681J	36.4	43.1	117		-	-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	1.10J	33.3	37.3	109		-	-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	1.82	36.4	47.0	124		-	-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	9.04	34.6	51.2	122		-	-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	34.6	43.5	126		-	-		61-179	-		30
Perfluorononanoic Acid (PFNA)	0.491J	36.4	51.0	139		-	-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	7.30	33.8	48.8	123		-	-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	ND	36.4	47.3	130		-	-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	34.9	46.7	134		-	-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	35	44.2	126		-	-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	36.4	49.1	135		-	-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	36.4	50.6	139		-	-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	35.1	48.1	137		-	-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	ND	36.4	38.8	107		-	-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	36.4	41.3	113		-	-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	ND	36.4	42.9	118		-	-		67-153	-		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 QC Batch ID: WG1484163-3 QC Sample: L2116995-08 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	36.4	53.6	147		-	-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	36.4	44.9	123		-	-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	728	873F	120		-	-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	34.4	39.0	114		-	-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	36.4	51.0	140		-	-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	ND	36.4	122F	**335**	Q	-	-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	35.2	49.5	141		-	-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	35.1	47.7	136		-	-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	33.9	29.4	87		-	-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	34.4	26.9	78		-	-		52-156	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	364	477	131		-	-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	364	475	131		-	-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	364	433	119		-	-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	364	428	118		-	-		66-176	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**174**	Q			10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**144**	Q			12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**174**	Q			14-147

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 QC Batch ID: WG1484163-3 QC Sample: L2116995-08 Client ID: MS Sample												

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	79				10-165
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	57				10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	57				10-189
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	78				27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	75				24-116
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	49				10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	52				10-161
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	80				55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	79				62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	67				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	78				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	102				71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	96				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	122				22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	76				10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	86				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**59**	Q			62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	78				10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	87				69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	80				62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	67				59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	82				70-131

Matrix Spike Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 04-15,17-24 QC Batch ID: WG1485711-4 WG1485711-5 QC Sample: L2117504-23 Client ID: HA-11-04072021												
1,4-Dioxane	ND	5	5.42	108		5.71	110		30-140	5		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		49		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 11-12,14-15,18-24 QC Batch ID: WG1486007-4 WG1486007-5 QC Sample: L2117504-23 Client ID: HA-11-04072021												
1,2,4-Trichlorobenzene	ND	18.2	8.4	46		9.1	50		40-140	8		20
Bis(2-chloroethyl)ether	ND	18.2	8.7	48		9.3	51		40-140	7		20
1,2-Dichlorobenzene	ND	18.2	7.9	43		8.2	45		40-140	4		20
1,3-Dichlorobenzene	ND	18.2	7.6	42		8.0	44		40-140	5		20
1,4-Dichlorobenzene	ND	18.2	7.6	42		8.2	45		40-140	8		20
3,3'-Dichlorobenzidine	ND	18.2	4.8J	**26**	Q	6.6	**36**	Q	40-140	**32**	Q	20
2,4-Dinitrotoluene	ND	18.2	12	66		13	72		40-140	8		20
2,6-Dinitrotoluene	ND	18.2	11	61		13	72		40-140	17		20
Azobenzene	ND	18.2	9.7	53		11	61		40-140	13		20
4-Bromophenyl phenyl ether	ND	18.2	9.4	52		10	55		40-140	6		20
Bis(2-chloroisopropyl)ether	ND	18.2	9.6	53		10	55		40-140	4		20
Bis(2-chloroethoxy)methane	ND	18.2	9.4	52		10	55		40-140	6		20
Isophorone	ND	18.2	9.5	52		10	55		40-140	5		20
Nitrobenzene	ND	18.2	11	61		12	66		40-140	9		20
Bis(2-ethylhexyl)phthalate	ND	18.2	14	77		15	83		40-140	7		20
Butyl benzyl phthalate	ND	18.2	15	83		16	88		40-140	6		20
Di-n-butylphthalate	ND	18.2	12	66		13	72		40-140	8		20
Di-n-octylphthalate	ND	18.2	15	83		16	88		40-140	6		20
Diethyl phthalate	ND	18.2	10	55		11	61		40-140	10		20
Dimethyl phthalate	ND	18.2	10	55		11	61		40-140	10		20
Aniline	ND	18.2	5.4	**30**	Q	5.5	**30**	Q	40-140	2		20
4-Chloroaniline	ND	18.2	6.0	**33**	Q	6.5	**36**	Q	40-140	8		20
Dibenzofuran	ND	18.2	8.5	47		9.6	53		40-140	12		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 11-12,14-15,18-24 QC Batch ID: WG1486007-4 WG1486007-5 QC Sample: L2117504-23 Client ID: HA-11-04072021												
Acetophenone	ND	18.2	9.0	50		9.8	54		40-140	9		20
2,4,6-Trichlorophenol	ND	18.2	11	61		12	66		30-130	9		20
2-Chlorophenol	ND	18.2	9.4	52		10	55		30-130	6		20
2,4-Dichlorophenol	ND	18.2	11	61		12	66		30-130	9		20
2,4-Dimethylphenol	ND	18.2	8.5	47		7.4	41		30-130	14		20
2-Nitrophenol	ND	18.2	13	72		14	77		30-130	7		20
4-Nitrophenol	ND	18.2	12	66		13	72		30-130	8		20
2,4-Dinitrophenol	ND	18.2	17J	94		18J	99		30-130	6		20
Phenol	ND	18.2	7.3	40		8.1	45		30-130	10		20
2-Methylphenol	ND	18.2	8.9	49		9.8	54		30-130	10		20
3-Methylphenol/4-Methylphenol	ND	18.2	9.7	53		11	61		30-130	13		20
2,4,5-Trichlorophenol	ND	18.2	11	61		12	66		30-130	9		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	75		80		15-110
2-Fluorobiphenyl	46		53		30-130
2-Fluorophenol	55		59		15-110
4-Terphenyl-d14	50		54		30-130
Nitrobenzene-d5	57		62		30-130
Phenol-d6	49		54		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 11-12,14-15,18-24 QC Batch ID: WG1486021-4 WG1486021-5 QC Sample: L2117504-23 Client ID: HA-11-04072021												
Acenaphthene	ND	18.2	14	77		13	72		40-140	7		20
2-Chloronaphthalene	ND	18.2	13	72		13	72		40-140	0		20
Fluoranthene	0.03J	18.2	16	88		15	83		40-140	6		20
Hexachlorobutadiene	ND	18.2	12	66		11	61		40-140	9		20
Naphthalene	ND	18.2	12	66		12	66		40-140	0		20
Benzo(a)anthracene	0.04J	18.2	15	83		15	83		40-140	0		20
Benzo(a)pyrene	0.04J	18.2	16	88		16	88		40-140	0		20
Benzo(b)fluoranthene	0.05J	18.2	16	88		15	83		40-140	6		20
Benzo(k)fluoranthene	0.02J	18.2	16	88		15	83		40-140	6		20
Chrysene	0.03J	18.2	14	77		14	77		40-140	0		20
Acenaphthylene	ND	18.2	14	77		14	77		40-140	0		20
Anthracene	ND	18.2	15	83		15	83		40-140	0		20
Benzo(ghi)perylene	0.04J	18.2	15	83		15	83		40-140	0		20
Fluorene	ND	18.2	14	77		14	77		40-140	0		20
Phenanthrene	ND	18.2	14	77		14	77		40-140	0		20
Dibenzo(a,h)anthracene	0.02J	18.2	16	88		15	83		40-140	6		20
Indeno(1,2,3-cd)pyrene	0.05J	18.2	17	94		16	88		40-140	6		20
Pyrene	0.04J	18.2	16	88		14	77		40-140	13		20
2-Methylnaphthalene	0.04J	18.2	13	72		12	66		40-140	8		20
Pentachlorophenol	ND	18.2	14	77		14	77		30-130	0		20
Hexachlorobenzene	ND	18.2	14	77		14	77		40-140	0		20
Hexachloroethane	ND	18.2	11	61		10	55		40-140	10		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

MCP Semivolatile Organics by SIM - Westborough Lab   Associated sample(s): 11-12,14-15,18-24   QC Batch ID: WG1486021-4 WG1486021-5   QC Sample: L2117504-23   Client ID: HA-11-04072021

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	98		94		15-110
2-Fluorobiphenyl	71		68		30-130
2-Fluorophenol	66		64		15-110
4-Terphenyl-d14	87		79		30-130
Nitrobenzene-d5	63		63		30-130
Phenol-d6	61		60		15-110

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: DUP Sample						
Perfluorobutanoic Acid (PFBA)	ND	ND	ng/l	NC		30
Perfluoropentanoic Acid (PFPeA)	ND	ND	ng/l	NC		30
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/l	NC		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	ng/l	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/l	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	0.914JF	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: DUP Sample						
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	ND	ng/l	NC		30
Perfluorooctadecanoic Acid (PFODA)	ND	ND	ng/l	NC		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
PFOA/PFOS, Total	ND	ND	ng/l	NC		30
PFAS, Total (5)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	79		84		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**61**	Q	68		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91		92		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	143	Q	122		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	72		75		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	87		87		60-129

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: DUP Sample

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	114		115		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	89		91		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**198**	Q	**184**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	74		78		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		96		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	80		91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**200**	Q	**187**	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	62		73		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		90		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	85		89		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	99		105		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	99		114		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	75		76		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	67		72		10-206

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 11-12,16 QC Batch ID: WG1484163-4 QC Sample: L2116995-09 Client ID: DUP Sample						
Perfluorooctanesulfonamide (FOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		70		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	36		35		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	28		29		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	48		50		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	44		45		10-187

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-01
Client ID: MW-S62A-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 17:20
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	23.0		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 08:07	44,353.2	MR
Nitrogen, Nitrate	1.8		mg/l	0.10	0.023	1	-	04/08/21 08:07	44,353.2	MR
Phosphorus, Total	0.009	J	mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:16	121,4500P-E	SD
Phosphorus, Orthophosphate	0.001	J	mg/l	0.005	0.001	1	-	04/08/21 06:08	121,4500P-E	AW
Dissolved Organic Carbon	0.55	J	mg/l	1.0	0.04	1	-	04/15/21 16:54	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	68.6		mg/l	5.00	0.839	10	-	04/13/21 20:26	44,300.0	AT
Fluoride	0.047	J	mg/l	0.050	0.037	1	-	04/13/21 18:47	44,300.0	AT
Sulfate	15.8		mg/l	1.00	0.454	1	-	04/13/21 18:47	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-03
Client ID: MW-BS28-04062021
Sample Location: CONCORD, MA
Date Collected: 04/06/21 17:10
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	212.		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 08:13	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/08/21 08:13	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:19	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/08/21 06:09	121,4500P-E	AW
Dissolved Organic Carbon	0.70	J	mg/l	1.0	0.04	1	-	04/15/21 17:21	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	42.9		mg/l	0.500	0.083	1	-	04/13/21 18:58	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/13/21 18:58	44,300.0	AT
Sulfate	361.		mg/l	10.0	4.54	10	-	04/13/21 21:43	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-04
Client ID: MW-BS17-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 08:18	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/08/21 08:18	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-05
Client ID: MW-SD62A-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 09:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	22.9		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 08:19	44,353.2	MR
Nitrogen, Nitrate	1.1		mg/l	0.10	0.023	1	-	04/08/21 08:19	44,353.2	MR
Phosphorus, Total	0.005	J	mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:21	121,4500P-E	SD
Phosphorus, Orthophosphate	0.008		mg/l	0.005	0.001	1	-	04/09/21 00:45	121,4500P-E	AS
Dissolved Organic Carbon	0.54	J	mg/l	1.0	0.04	1	-	04/15/21 17:50	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	70.6		mg/l	5.00	0.839	10	-	04/13/21 21:54	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/13/21 19:09	44,300.0	AT
Sulfate	21.5		mg/l	10.0	4.54	10	-	04/13/21 21:54	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-06
Client ID: HB-11-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 09:55
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 08:21	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/08/21 08:21	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-07
Client ID: HA20-CMT-1S-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 10:20
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	18.3		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 08:22	44,353.2	MR
Nitrogen, Nitrate	3.1		mg/l	0.10	0.023	1	-	04/08/21 08:22	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:24	121,4500P-E	SD
Phosphorus, Orthophosphate	0.001	J	mg/l	0.005	0.001	1	-	04/09/21 00:46	121,4500P-E	AS
Dissolved Organic Carbon	0.54	J	mg/l	1.0	0.04	1	-	04/15/21 18:19	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	81.3		mg/l	5.00	0.839	10	-	04/13/21 22:05	44,300.0	AT
Fluoride	0.048	J	mg/l	0.050	0.037	1	-	04/13/21 19:20	44,300.0	AT
Sulfate	16.0		mg/l	1.00	0.454	1	-	04/13/21 19:20	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-08
Client ID: MW-BS39-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:00
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 08:23	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/08/21 08:23	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-09
Client ID: MW-S14-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:00
Date Received: 04/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 08:26	44,353.2	MR
Nitrogen, Nitrate	0.59		mg/l	0.10	0.023	1	-	04/08/21 08:26	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-10
Client ID: MW-SD63-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	20.2		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 08:27	44,353.2	MR
Nitrogen, Nitrate	1.2		mg/l	0.10	0.023	1	-	04/08/21 08:27	44,353.2	MR
Phosphorus, Total	0.005	J	mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:25	121,4500P-E	SD
Phosphorus, Orthophosphate	0.004	J	mg/l	0.005	0.001	1	-	04/09/21 00:46	121,4500P-E	AS
Dissolved Organic Carbon	0.53	J	mg/l	1.0	0.04	1	-	04/15/21 18:49	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	76.8		mg/l	5.00	0.839	10	-	04/13/21 23:54	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/13/21 19:31	44,300.0	AT
Sulfate	19.6		mg/l	1.00	0.454	1	-	04/13/21 19:31	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-11
Client ID: MW-BS12-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 11:30
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	84.6		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 02:57	44,353.2	MR
Nitrogen, Nitrate	0.15		mg/l	0.10	0.023	1	-	04/09/21 02:57	44,353.2	MR
Phosphorus, Total	0.052		mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:26	121,4500P-E	SD
Phosphorus, Orthophosphate	0.029		mg/l	0.005	0.001	1	-	04/09/21 00:47	121,4500P-E	AS
Dissolved Organic Carbon	1.4		mg/l	1.0	0.04	1	-	04/15/21 19:13	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	4.75		mg/l	0.500	0.083	1	-	04/13/21 22:37	44,300.0	AT
Fluoride	0.273		mg/l	0.050	0.037	1	-	04/13/21 22:37	44,300.0	AT
Sulfate	16.5		mg/l	1.00	0.454	1	-	04/13/21 22:37	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-12
Client ID: EQBLANK1-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 12:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Alkalinity, Bicarbonate	7.80		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 02:58	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 02:58	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:27	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/09/21 00:48	121,4500P-E	AS
Dissolved Organic Carbon	0.20	J	mg/l	1.0	0.04	1	-	04/15/21 19:37	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	0.402	J	mg/l	0.500	0.083	1	-	04/13/21 18:15	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/13/21 18:15	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/13/21 18:15	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-13
Client ID: HA20-CMT-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 12:45
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	28.6		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 02:59	44,353.2	MR
Nitrogen, Nitrate	3.9		mg/l	0.10	0.023	1	-	04/09/21 02:59	44,353.2	MR
Phosphorus, Total	0.004	J	mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:28	121,4500P-E	SD
Phosphorus, Orthophosphate	0.001	J	mg/l	0.005	0.001	1	-	04/09/21 00:48	121,4500P-E	AS
Dissolved Organic Carbon	0.42	J	mg/l	1.0	0.04	1	-	04/15/21 22:53	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	82.6		mg/l	5.00	0.839	10	-	04/14/21 00:05	44,300.0	AT
Fluoride	0.038	J	mg/l	0.050	0.037	1	-	04/13/21 19:53	44,300.0	AT
Sulfate	21.4		mg/l	1.00	0.454	1	-	04/13/21 19:53	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-14
Client ID: MW-SD02-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 13:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	20.9		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:01	44,353.2	MR
Nitrogen, Nitrate	1.8		mg/l	0.10	0.023	1	-	04/09/21 03:01	44,353.2	MR
Phosphorus, Total	0.034		mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:30	121,4500P-E	SD
Phosphorus, Orthophosphate	0.027		mg/l	0.005	0.001	1	-	04/09/21 00:48	121,4500P-E	AS
Dissolved Organic Carbon	0.60	J	mg/l	1.0	0.04	1	-	04/15/21 23:21	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	58.0		mg/l	5.00	0.839	10	-	04/14/21 00:16	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/13/21 20:04	44,300.0	AT
Sulfate	16.2		mg/l	1.00	0.454	1	-	04/13/21 20:04	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-15
Client ID: MW-SM46-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 13:30
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.022	J	mg/l	0.050	0.014	1	-	04/09/21 03:02	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:02	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-17
Client ID: MW-S32-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 08:50
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:03	44,353.2	MR
Nitrogen, Nitrate	0.80		mg/l	0.10	0.023	1	-	04/09/21 03:03	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-18
Client ID: MW-SD32-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 10:50
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:04	44,353.2	MR
Nitrogen, Nitrate	0.37		mg/l	0.10	0.023	1	-	04/09/21 03:04	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	30.8		mg/l	0.500	0.083	1	-	04/14/21 01:32	44,300.0	AT
Fluoride	0.045	J	mg/l	0.050	0.037	1	-	04/14/21 01:32	44,300.0	AT
Sulfate	10.8		mg/l	1.00	0.454	1	-	04/14/21 01:32	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-19
Client ID: MW-BS32-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 14:10
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:06	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:06	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	111.		mg/l	5.00	0.839	10	-	04/14/21 00:27	44,300.0	AT
Fluoride	0.115		mg/l	0.050	0.037	1	-	04/13/21 20:59	44,300.0	AT
Sulfate	36.6		mg/l	1.00	0.454	1	-	04/13/21 20:59	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-20
Client ID: MW-S63-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 14:15
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	30.9		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:16	44,353.2	MR
Nitrogen, Nitrate	1.5		mg/l	0.10	0.023	1	-	04/09/21 03:16	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:31	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/09/21 00:49	121,4500P-E	AS
Dissolved Organic Carbon	0.55	J	mg/l	1.0	0.04	1	-	04/19/21 09:39	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	74.8		mg/l	5.00	0.839	10	-	04/14/21 00:37	44,300.0	AT
Fluoride	0.041	J	mg/l	0.050	0.037	1	-	04/13/21 21:10	44,300.0	AT
Sulfate	16.4		mg/l	1.00	0.454	1	-	04/13/21 21:10	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-21
Client ID: MW-BS14-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 13:55
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:17	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:17	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-22 Date Collected: 04/07/21 15:30
Client ID: MW-SD24-04072021 Date Received: 04/07/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	21.9		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:19	44,353.2	MR
Nitrogen, Nitrate	1.8		mg/l	0.10	0.023	1	-	04/09/21 03:19	44,353.2	MR
Phosphorus, Total	0.004	J	mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:32	121,4500P-E	SD
Phosphorus, Orthophosphate	0.002	J	mg/l	0.005	0.001	1	-	04/09/21 00:49	121,4500P-E	AS
Dissolved Organic Carbon	0.57	J	mg/l	1.0	0.04	1	-	04/19/21 10:07	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	71.1		mg/l	5.00	0.839	10	-	04/14/21 01:55	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/13/21 21:21	44,300.0	AT
Sulfate	17.0		mg/l	1.00	0.454	1	-	04/13/21 21:21	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-23
Client ID: HA-11-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:40
Date Received: 04/07/21
Field Prep: None

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:20	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:20	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

SAMPLE RESULTS

Lab ID: L2117504-24
Client ID: HA20-CMT-1D1-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 16:00
Date Received: 04/07/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	162.		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:30	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:30	44,353.2	MR
Phosphorus, Total	0.059		mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:33	121,4500P-E	SD
Phosphorus, Orthophosphate	0.015		mg/l	0.005	0.001	1	-	04/09/21 00:50	121,4500P-E	AS
Dissolved Organic Carbon	46		mg/l	40	1.7	40	-	04/19/21 10:34	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	130.		mg/l	12.5	2.10	25	-	04/14/21 01:44	44,300.0	AT
Fluoride	0.534		mg/l	0.050	0.037	1	-	04/13/21 21:32	44,300.0	AT
Sulfate	609.		mg/l	25.0	11.4	25	-	04/14/21 01:44	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2117504
Project Number: 3252H **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01,03 Batch: WG1483711-1										
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/08/21 06:07	121,4500P-E	AW
General Chemistry - Westborough Lab for sample(s): 01,03-10 Batch: WG1483726-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/08/21 07:28	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01,03-10 Batch: WG1483727-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/08/21 07:30	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 05,07,10-14,20,22,24 Batch: WG1484129-1										
Phosphorus, Orthophosphate	0.001	J	mg/l	0.005	0.001	1	-	04/09/21 00:44	121,4500P-E	AS
General Chemistry - Westborough Lab for sample(s): 11-15,17-21 Batch: WG1484144-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:47	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 11-15,17-21 Batch: WG1484145-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:40	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 22-24 Batch: WG1484146-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:47	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 22-24 Batch: WG1484147-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:40	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab for sample(s): 01,03,05,07,10-12 Batch: WG1485869-1										
Chloride	0.094	J	mg/l	0.500	0.083	1	-	04/13/21 16:58	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/13/21 16:58	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/13/21 16:58	44,300.0	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 13-14,18-20,22,24 Batch: WG1485870-1										
Chloride	0.094	J	mg/l	0.500	0.083	1	-	04/13/21 16:58	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/13/21 16:58	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/13/21 16:58	44,300.0	AT
General Chemistry - Westborough Lab for sample(s): 01,03,05,07,10-14,20,22,24 Batch: WG1486027-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/14/21 09:45	04/14/21 13:14	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01,03,05,07,10-14 Batch: WG1486449-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	04/15/21 06:48	1,9060A	DW
General Chemistry - Westborough Lab for sample(s): 01,03,05,07,10-12 Batch: WG1486666-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB

Project Name: NUCLEAR METALS | **Lab Number:** L2117504
Project Number: 3252H | **Report Date:** 04/22/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01,03,05,07,10-12 Batch: WG1486668-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/15/21 13:45	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 20,22,24 Batch: WG1486943-1										
Dissolved Organic Carbon	0.05	J	mg/l	1.0	0.04	1	-	04/19/21 07:15	1,9060A	DW
General Chemistry - Westborough Lab for sample(s): 13-14,20,22,24 Batch: WG1487156-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 13-14,20,22,24 Batch: WG1487164-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03 Batch: WG1483711-2								
Phosphorus, Orthophosphate	90		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03-10 Batch: WG1483726-2								
Nitrogen, Nitrate	92		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03-10 Batch: WG1483727-2								
Nitrogen, Nitrite	96		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 05,07,10-14,20,22,24 Batch: WG1484129-2								
Phosphorus, Orthophosphate	95		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 11-15,17-21 Batch: WG1484144-2								
Nitrogen, Nitrite	94		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 11-15,17-21 Batch: WG1484145-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 22-24 Batch: WG1484146-2								
Nitrogen, Nitrite	94		-		90-110	-		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 22-24 Batch: WG1484147-2					
Nitrogen, Nitrate	96	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05,07,10-12 Batch: WG1485869-2					
Chloride	97	-	90-110	-	
Fluoride	94	-	90-110	-	
Sulfate	95	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 13-14,18-20,22,24 Batch: WG1485870-2					
Chloride	97	-	90-110	-	
Fluoride	94	-	90-110	-	
Sulfate	95	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01,03,05,07,10-14,20,22,24 Batch: WG1486027-2					
Phosphorus, Total	100	-	80-120	-	
General Chemistry - Westborough Lab Associated sample(s): 01,03,05,07,10-14 Batch: WG1486449-2					
Dissolved Organic Carbon	102	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 20,22,24 Batch: WG1486943-2					
Dissolved Organic Carbon	98	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG1483711-4 QC Sample: L2117504-01 Client ID: MW-S62A-04062021												
Phosphorus, Orthophosphate	0.001J	0.5	0.504	101		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03-10 QC Batch ID: WG1483726-4 QC Sample: L2117504-01 Client ID: MW-S62A-04062021												
Nitrogen, Nitrate	1.8	4	5.8	100		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01,03-10 QC Batch ID: WG1483727-4 QC Sample: L2117504-01 Client ID: MW-S62A-04062021												
Nitrogen, Nitrite	ND	4	4.4	110		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 11-15,17-21 QC Batch ID: WG1484144-4 QC Sample: L2117504-19 Client ID: MW-BS32-04072021												
Nitrogen, Nitrite	ND	4	4.7	118		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 11-15,17-21 QC Batch ID: WG1484145-4 QC Sample: L2117504-19 Client ID: MW-BS32-04072021												
Nitrogen, Nitrate	ND	4	6.5	**162**	Q	-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 22-24 QC Batch ID: WG1484146-4 QC Sample: L2117504-23 Client ID: HA-11-04072021												
Nitrogen, Nitrite	ND	4	5.0	**125**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 22-24 QC Batch ID: WG1484147-4 QC Sample: L2117504-23 Client ID: HA-11-04072021												
Nitrogen, Nitrate	ND	4	5.7	**142**	Q	-	-		83-113	-		6

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05,07,10-12 QC Batch ID: WG1485869-3 QC Sample: L2117504-11 Client ID: MW-BS12-04072021										
Chloride	4.75	4	8.46	93		-	-	90-110	-	18
Fluoride	0.273	0.4	0.659	96		-	-	90-110	-	15
Sulfate	16.5	8	23.4	**86**	Q	-	-	90-110	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 13-14,18-20,22,24 QC Batch ID: WG1485870-3 QC Sample: L2117504-18 Client ID: MW-SD32-04072021										
Chloride	30.8	4	33.6	**69**	Q	-	-	90-110	-	18
Fluoride	0.045J	0.4	0.395	99		-	-	90-110	-	15
Sulfate	10.8	8	18.1	92		-	-	90-110	-	20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05,07,10-14,20,22,24 QC Batch ID: WG1486027-3 QC Sample: L2117504-01 Client ID: MW-S62A-04062021										
Phosphorus, Total	0.009J	0.5	0.488	98		-	-	75-125	-	20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05,07,10-14 QC Batch ID: WG1486449-4 QC Sample: L2117504-01 Client ID: MW-S62A-04062021										
Dissolved Organic Carbon	0.55J	8	8.6	108		-	-	80-120	-	20
General Chemistry - Westborough Lab Associated sample(s): 20,22,24 QC Batch ID: WG1486943-4 QC Sample: L2117504-24 Client ID: HA20-CMT-1D1-04072021										
Dissolved Organic Carbon	46	160	240	120		-	-	80-120	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG1483711-3 QC Sample: L2117504-01 Client ID: MW-S62A-04062021						
Phosphorus, Orthophosphate	0.001J	0.001J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01,03-10 QC Batch ID: WG1483726-3 QC Sample: L2117504-01 Client ID: MW-S62A-04062021						
Nitrogen, Nitrate	1.8	1.9	mg/l	5		6
General Chemistry - Westborough Lab Associated sample(s): 01,03-10 QC Batch ID: WG1483727-3 QC Sample: L2117504-01 Client ID: MW-S62A-04062021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 11-15,17-21 QC Batch ID: WG1484144-3 QC Sample: L2117504-19 Client ID: MW-BS32-04072021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 11-15,17-21 QC Batch ID: WG1484145-3 QC Sample: L2117504-19 Client ID: MW-BS32-04072021						
Nitrogen, Nitrate	ND	ND	mg/l	NC		6
General Chemistry - Westborough Lab Associated sample(s): 22-24 QC Batch ID: WG1484146-3 QC Sample: L2117504-23 Client ID: HA-11-04072021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 22-24 QC Batch ID: WG1484147-3 QC Sample: L2117504-23 Client ID: HA-11-04072021						
Nitrogen, Nitrate	ND	ND	mg/l	NC		6

Lab Duplicate Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05,07,10-12 QC Batch ID: WG1485869-4 QC Sample: L2117504-11 Client ID: MW-BS12-04072021					
Chloride	4.75	4.74	mg/l	1	18
Fluoride	0.273	0.264	mg/l	3	15
Sulfate	16.5	16.5	mg/l	1	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 13-14,18-20,22,24 QC Batch ID: WG1485870-4 QC Sample: L2117504-18 Client ID: MW-SD32-04072021					
Chloride	30.8	31.0	mg/l	1	18
Fluoride	0.045J	0.041J	mg/l	NC	15
Sulfate	10.8	10.9	mg/l	1	20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05,07,10-14,20,22,24 QC Batch ID: WG1486027-4 QC Sample: L2117504-01 Client ID: MW-S62A-04062021					
Phosphorus, Total	0.009J	0.008J	mg/l	NC	20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05,07,10-14 QC Batch ID: WG1486449-3 QC Sample: L2117504-01 Client ID: MW-S62A-04062021					
Dissolved Organic Carbon	0.55J	0.50J	mg/l	NC	20
General Chemistry - Westborough Lab Associated sample(s): 20,22,24 QC Batch ID: WG1486943-3 QC Sample: L2117504-24 Client ID: HA20-CMT-1D1-04072021					
Dissolved Organic Carbon	46	48	mg/l	4	20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent
E	Absent
F	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-01A	Vial HCl preserved	F	NA		5.1	Y	Absent		MCP-8260-10(14)
L2117504-01B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-01C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-01D	Vial H2SO4 preserved	C	NA		3.9	Y	Absent		DOC-9060(28)
L2117504-01E	Vial H2SO4 preserved	C	NA		3.9	Y	Absent		DOC-9060(28)
L2117504-01F	Vial H2SO4 preserved	C	NA		3.9	Y	Absent		DOC-9060(28)
L2117504-01I	Plastic 250ml unpreserved/No Headspace	C	NA		3.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-01K	Plastic 250ml H2SO4 preserved	C	<2	<2	3.9	Y	Absent		TPHOS-4500(28)
L2117504-01L	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-01M	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-01N	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-01O	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-01P	Plastic 500ml unpreserved	C	6	6	3.9	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2117504-02A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-02B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-03A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-03B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-03C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-03D	Vial H2SO4 preserved	C	NA		3.9	Y	Absent		DOC-9060(28)
L2117504-03E	Vial H2SO4 preserved	C	NA		3.9	Y	Absent		DOC-9060(28)
L2117504-03F	Vial H2SO4 preserved	C	NA		3.9	Y	Absent		DOC-9060(28)
L2117504-03I	Plastic 250ml unpreserved/No Headspace	C	NA		3.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-03K	Plastic 250ml H2SO4 preserved	C	<2	<2	3.9	Y	Absent		TPHOS-4500(28)
L2117504-03L	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-03M	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-03N	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-03O	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-03P	Plastic 500ml unpreserved	C	6	6	3.9	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2117504-04A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-04B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-04C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-04J	Plastic 120ml unpreserved	C	7	7	3.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-04L	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-04M	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-04N	Amber 250ml unpreserved	C	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-04O	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-05A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-05B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-05C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-05D	Vial H2SO4 preserved	C	NA		3.9	Y	Absent		DOC-9060(28)
L2117504-05E	Vial H2SO4 preserved	C	NA		3.9	Y	Absent		DOC-9060(28)
L2117504-05F	Vial H2SO4 preserved	C	NA		3.9	Y	Absent		DOC-9060(28)
L2117504-05I	Plastic 250ml unpreserved/No Headspace	C	NA		3.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-05K	Plastic 250ml H2SO4 preserved	C	<2	<2	3.9	Y	Absent		TPHOS-4500(28)
L2117504-05L	Amber 250ml unpreserved	C	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-05M	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-05N	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-05O	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-05P	Plastic 500ml unpreserved	C	6	6	3.9	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2117504-06A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-06B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-06C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-06J	Plastic 120ml unpreserved	C	6	6	3.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-06L	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-06M	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-06N	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-06O	Amber 250ml unpreserved	C	6	6	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-07A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-07B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-07C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-07D	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-07E	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-07F	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-07I	Plastic 250ml unpreserved/No Headspace	D	NA		5.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-07K	Plastic 250ml H2SO4 preserved	D	<2	<2	5.2	Y	Absent		TPHOS-4500(28)
L2117504-07L	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-07M	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-07N	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-07O	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-07P	Plastic 500ml unpreserved	D	6	6	5.2	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2117504-08A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-08B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-08C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-08J	Plastic 120ml unpreserved	C	7	7	3.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-08L	Amber 250ml unpreserved	C	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-08M	Amber 250ml unpreserved	C	7	7	3.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-08N	Amber 250ml unpreserved	C	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-08O	Amber 250ml unpreserved	C	7	7	3.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-09A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-09B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-09C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-09J	Plastic 120ml unpreserved	D	6	6	5.2	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-09L	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-09M	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-09N	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-09O	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-10A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-10B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-10C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-10D	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-10E	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-10F	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-10I	Plastic 250ml unpreserved/No Headspace	D	NA		5.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-10K	Plastic 250ml H2SO4 preserved	D	<2	<2	5.2	Y	Absent		TPHOS-4500(28)
L2117504-10L	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-10M	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-10N	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-10O	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-10P	Plastic 500ml unpreserved	D	6	6	5.2	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2117504-11A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-11B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-11C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-11D	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-11E	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-11F	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-11G	Plastic 250ml unpreserved	B	NA		5.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2117504-11H	Plastic 250ml unpreserved	B	NA		5.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2117504-11I	Plastic 250ml unpreserved/No Headspace	D	NA		5.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-11K	Plastic 250ml H2SO4 preserved	D	<2	<2	5.2	Y	Absent		TPHOS-4500(28)
L2117504-11L	Amber 250ml unpreserved	D	10	10	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-11M	Amber 250ml unpreserved	D	10	10	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-11N	Amber 250ml unpreserved	D	10	10	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-11O	Amber 250ml unpreserved	D	10	10	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-11P	Plastic 500ml unpreserved	D	10	10	5.2	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2117504-12A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-12B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-12C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-12D	Vial H2SO4 preserved	F	NA		5.1	Y	Absent		DOC-9060(28)
L2117504-12E	Vial H2SO4 preserved	F	NA		5.1	Y	Absent		DOC-9060(28)
L2117504-12F	Vial H2SO4 preserved	F	NA		5.1	Y	Absent		DOC-9060(28)
L2117504-12G	Plastic 250ml unpreserved	B	NA		5.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2117504-12H	Plastic 250ml unpreserved	B	NA		5.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2117504-12I	Plastic 250ml unpreserved/No Headspace	F	NA		5.1	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-12J	Plastic 120ml unpreserved	F	6	6	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-12K	Plastic 250ml H2SO4 preserved	F	<2	<2	5.1	Y	Absent		TPHOS-4500(28)
L2117504-12L	Amber 250ml unpreserved	F	6	6	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-12M	Amber 250ml unpreserved	F	6	6	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-12N	Amber 250ml unpreserved	F	6	6	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-12O	Amber 250ml unpreserved	F	6	6	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-12P	Plastic 250ml unpreserved	F	6	6	5.1	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28)
L2117504-13A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-13B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-13C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-13D	Vial H2SO4 preserved	E	NA		5.0	Y	Absent		DOC-9060(28)
L2117504-13E	Vial H2SO4 preserved	E	NA		5.0	Y	Absent		DOC-9060(28)
L2117504-13F	Vial H2SO4 preserved	E	NA		5.0	Y	Absent		DOC-9060(28)
L2117504-13I	Plastic 250ml unpreserved/No Headspace	E	NA		5.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-13K	Plastic 250ml H2SO4 preserved	E	<2	<2	5.0	Y	Absent		TPHOS-4500(28)
L2117504-13L	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-13M	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-13N	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-13O	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-13P	Plastic 500ml unpreserved	E	6	6	5.0	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2117504-14A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-14B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-14C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-14D	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-14E	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-14F	Vial H2SO4 preserved	D	NA		5.2	Y	Absent		DOC-9060(28)
L2117504-14I	Plastic 250ml unpreserved/No Headspace	D	NA		5.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-14K	Plastic 250ml H2SO4 preserved	D	<2	<2	5.2	Y	Absent		TPHOS-4500(28)
L2117504-14L	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-14M	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-14N	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-14O	Amber 250ml unpreserved	D	6	6	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-14P	Plastic 500ml unpreserved	D	6	6	5.2	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-15A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-15B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-15C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-15J	Plastic 120ml unpreserved	E	6	6	5.0	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-15L	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-15M	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-15N	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-15O	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-16A	Plastic 250ml unpreserved	B	NA		5.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2117504-17A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-17B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-17C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-17J	Plastic 120ml unpreserved	E	6	6	5.0	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-17L	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-17M	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-17N	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-17O	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-18A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-18B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-18C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-18J	Plastic 120ml unpreserved	E	6	6	5.0	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-18L	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-18M	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-18N	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-18O	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-18P	Plastic 250ml unpreserved	E	6	6	5.0	Y	Absent		SO4-300(28),F-300(28),CL-300(28)
L2117504-19A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-19B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-19C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-19J	Plastic 120ml unpreserved	E	6	6	5.0	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-19L	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-19M	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-19N	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-19O	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-19P	Plastic 250ml unpreserved	E	6	6	5.0	Y	Absent		SO4-300(28),F-300(28),CL-300(28)
L2117504-20A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-20B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-20C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-20D	Vial H2SO4 preserved	E	NA		5.0	Y	Absent		DOC-9060(28)
L2117504-20E	Vial H2SO4 preserved	E	NA		5.0	Y	Absent		DOC-9060(28)
L2117504-20F	Vial H2SO4 preserved	E	NA		5.0	Y	Absent		DOC-9060(28)
L2117504-20G	Plastic 250ml unpreserved/No Headspace	E	NA		5.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-20H	Plastic 250ml H2SO4 preserved	E	<2	<2	5.0	Y	Absent		TPHOS-4500(28)
L2117504-20I	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-20J	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-20K	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		SO4-300(28),CL-300(28),F-300(28)
L2117504-20L	Amber 250ml unpreserved	E	6	6	5.0	Y	Absent		OPHOS-4500(2),NO2-353(2),NO3-353(2)
L2117504-21A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-21B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-21C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-21J	Plastic 120ml unpreserved	F	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-21L	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-21M	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-21N	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-21O	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-22A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117504
Report Date: 04/22/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-22B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-22C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-22D	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)
L2117504-22E	Vial H2SO4 preserved	F	NA		5.1	Y	Absent		DOC-9060(28)
L2117504-22F	Vial H2SO4 preserved	F	NA		5.1	Y	Absent		DOC-9060(28)
L2117504-22I	Plastic 250ml unpreserved/No Headspace	F	NA		5.1	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-22K	Plastic 250ml H2SO4 preserved	F	<2	<2	5.1	Y	Absent		TPHOS-4500(28)
L2117504-22L	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-22M	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-22N	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-22O	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-22P	Plastic 500ml unpreserved	F	7	7	5.1	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2117504-23A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-23A1	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-23A2	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-23B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-23B1	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-23B2	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-23C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-23C1	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-23C2	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-23J	Plastic 120ml unpreserved	F	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-23J1	Plastic 120ml unpreserved	F	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-23J2	Plastic 120ml unpreserved	F	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2117504-23L	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-23L1	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-23L2	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-23M	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2117504

Report Date: 04/22/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117504-23M1	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-23M2	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-23N	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-23N1	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-23N2	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-23O	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-23O1	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-23O2	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-24A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-24B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-24C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2117504-24D	Vial H2SO4 preserved	F	NA		5.1	Y	Absent		DOC-9060(28)
L2117504-24E	Vial H2SO4 preserved	F	NA		5.1	Y	Absent		DOC-9060(28)
L2117504-24F	Vial H2SO4 preserved	F	NA		5.1	Y	Absent		DOC-9060(28)
L2117504-24I	Plastic 250ml unpreserved/No Headspace	F	NA		5.1	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117504-24K	Plastic 250ml H2SO4 preserved	F	<2	<2	5.1	Y	Absent		TPHOS-4500(28)
L2117504-24L	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-24M	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117504-24N	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-24O	Amber 250ml unpreserved	F	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117504-24P	Plastic 500ml unpreserved	F	7	7	5.1	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)

*Values in parentheses indicate holding time in days

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117504
Project Number:	3252H	**Report Date:**	04/22/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF COUNTY

PAGE 1 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/7/21

ALPHA Job #: L2117504

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
17504 - 01	MW-S62A-04062021	4/6/2021	17:20	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
02	Trip Blank1-04072021	3/30/21	–	TB	PC	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		2
03	MW-BS28-04062021	4/6/2021	17:10	GW	CF	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
04	MW-BS17-04072021	4/7/2021	9:30	GW	RM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
05	MW-SD62A-04072021	4/7/2021	9:30	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
06	HB-11-04072021	4/7/2021	9:55	GW	ELL	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
07	HA20-CMT-1S-04072021	4/7/2021	10:20	GW	SRP	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
08	MW-BS39-04072021	4/7/2021	11:00	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
09	MW-S14-04072021	4/7/2021	11:00	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
10	MW-SD63-04072021	4/7/2021	11:30	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/7/21 1645	Rob Maesto AAL	4/7/21 1645
Rob Maesto	4/7/21 1805	[signature] AAL	4/7/21 1805

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 5-JAN-12)

(6)

CHAIN OF COUNTING

PAGE 2 OF 3

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/7/21

ALPHA Job #: L2117504

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

Please use any extra volume from Amber bottles for Anions analysis, if possible.

ANALYSIS

SAMPLE HANDLING

Filtration

☒ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
17504-11	MW-BS12-04072021	4/7/2021	11:30	GW	PB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		18
-12	EQ Blank1-04072021	4/7/2021	12:00	EB	NH	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
-13	HA20-CMT-1I-04072021	4/7/2021	12:45	GW	SRP	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-14	MW-SD02-04072021	4/7/2021	13:00	GW	RM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-15	MW-SM46-04072021	4/7/2021	13:30	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-16	Field Blank1-04072021	4/7/2021	14:00	GW	NH	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐		2
-17	MW-S32-04072021	4/7/2021	8:50	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-18	MW-SD32-04072021	4/7/2021	10:50	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
-19	MW-BS32-04072021	4/7/2021	14:10	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
-20	MW-S63-04072021	4/7/2021	14:15	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	**See Notes	13
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I)
(rev. 8-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/7/21 1645	Rob Maert AAL	4/7/21 1645
Rob Maerto	4/7/21 1805	[signature]	4/7/21 1805

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CHAIN OF CUSTODY

PAGE 3 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/7/21

ALPHA Job #: L2117504

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
17504-21	MW-BS14-04072021	4/7/2021	13:55	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-22	MW-SD24-04072021	4/7/2021	15:30	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-23	HA-11-04072021	4/7/2021	15:40	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	MS/MSD	24
-24	HA20-CMT-1D1-04072021	4/7/2021	16:00	GW	SRP	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/7/21 1645	Rob Maerto AAL	4/7/21 1645
Rob Maerto	4/7/21 18:05	[signature]	4/7/21 1805

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117504**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487632-5**	**Lab File ID**	**: J210417A06**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/17/21 09:15**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487632-3LCS	WG1487632-3	04/17/21 07:53
WG1487632-4LCSD	WG1487632-4	04/17/21 08:34
TRIP BLANK1-04072021	L2117504-02	04/17/21 09:56
MW-S62A-04062021	L2117504-01	04/17/21 10:37
MW-BS28-04062021	L2117504-03	04/17/21 11:18
MW-BS17-04072021	L2117504-04	04/17/21 11:59
MW-SD62A-04072021	L2117504-05	04/17/21 12:41
HB-11-04072021	L2117504-06	04/17/21 13:22
HA20-CMT-1S-04072021	L2117504-07	04/17/21 14:03
MW-BS39-04072021	L2117504-08	04/17/21 14:44

Method Blank Summary
Form 4
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117504
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Lab Sample ID	: WG1487621-5	Lab File ID	: J210417A07
Instrument ID	: JACK		
Matrix	: WATER	Analysis Date	: 04/17/21 09:36

Client Sample No.	Lab Sample ID	Analysis Date
WG1487621-3LCS	WG1487621-3	04/17/21 08:13
WG1487621-4LCSD	WG1487621-4	04/17/21 08:54
MW-S14-04072021	L2117504-09	04/17/21 15:46
MW-BS12-04072021	L2117504-11	04/17/21 16:27
MW-SM46-04072021	L2117504-15	04/17/21 17:49
MW-SD32-04072021	L2117504-18	04/17/21 18:30

Method Blank Summary
Form 4
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2117504
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Lab Sample ID	: WG1487906-5	**Lab File ID**	: VQ210419A04
Instrument ID	: QUIMBY		
Matrix	: WATER	**Analysis Date**	: 04/19/21 03:25

Client Sample No.	Lab Sample ID	Analysis Date
WG1487906-3LCS	WG1487906-3	04/19/21 01:54
WG1487906-4LCSD	WG1487906-4	04/19/21 02:24
HA-11-04072021	L2117504-23	04/19/21 04:26
HA20-CMT-1D1-04072021	L2117504-24	04/19/21 04:56
MW-SD63-04072021	L2117504-10	04/19/21 06:27
EQBLANK1-04072021	L2117504-12	04/19/21 06:57
HA20-CMT-11-04072021	L2117504-13	04/19/21 07:27
MW-SD02-04072021	L2117504-14	04/19/21 07:57
MW-S32-04072021	L2117504-17	04/19/21 08:28
MW-BS32-04072021	L2117504-19	04/19/21 08:58
MW-BS14-04072021	L2117504-21	04/19/21 09:28
MW-SD24-04072021	L2117504-22	04/19/21 11:29
HA-11-04072021MS	WG1487906-6	04/19/21 12:30
HA-11-04072021MSD	WG1487906-7	04/19/21 13:01

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117504**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1489044-5**	**Lab File ID**	**: J210421A11**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/21/21 08:38**

Client Sample No.	Lab Sample ID	Analysis Date
WG1489044-3LCS	WG1489044-3	04/21/21 05:14
WG1489044-4LCSD	WG1489044-4	04/21/21 05:55
MW-S63-04072021	L2117504-20	04/21/21 10:42

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117504**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Instrument ID	**: JACK**	**Calibration Date**	**: 04/17/21 07:53**
Lab File ID	**: J210417A02**	**Init. Calib. Date(s)**	**: 04/06/21 04/06/21**
Sample No	**: WG1487632-2**	**Init. Calib. Times**	**: 06:30 15:24**
Channel	**:**		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	83	0
Dichlorodifluoromethane	0.988	0.614	-	37.9*	20	44	0
Chloromethane	1.815	1.676	-	7.7	20	68	0
Vinyl chloride	2.051	2.043	-	0.4	20	72	0
Bromomethane	10	11.352	-	-13.5	20	80	0
Chloroethane	1.105	1.271	-	-15	20	83	0
Trichlorofluoromethane	1.917	1.89	-	1.4	20	74	0
Ethyl ether	0.807	0.837	-	-3.7	20	80	0
1,1-Dichloroethene	1.166	1.201	-	-3	20	79	0
Carbon disulfide	3.943	4.139	-	-5	20	79	0
Freon-113	1.185	1.23	-	-3.8	20	81	0
Methylene chloride	1.4	1.507	-	-7.6	20	82	0
Acetone	0.45	0.554	-	-23.1*	20	92	0
trans-1,2-Dichloroethene	1.251	1.294	-	-3.4	20	79	0
Methyl acetate	1.243	1.464	-	-17.8	20	91	0
Methyl tert-butyl ether	3.987	3.849	-	3.5	20	75	0
tert-Butyl alcohol	0.133	0.132	-	0.8	20	75	0
Diisopropyl ether	5.638	6.089	-	-8	20	83	0
1,1-Dichloroethane	3	3.438	-	-14.6	20	85	0
Halothane	0.888	0.98	-	-10.4	20	85	0
Acrylonitrile	0.612	0.675	-	-10.3	20	84	0
Ethyl tert-butyl ether	4.868	4.819	-	1	20	77	0
Vinyl acetate	4.411	4.746	-	-7.6	20	84	0
cis-1,2-Dichloroethene	1.456	1.536	-	-5.5	20	81	0
2,2-Dichloropropane	2.152	2.414	-	-12.2	20	87	0
Bromochloromethane	0.558	0.605	-	-8.4	20	84	0
Cyclohexane	3.001	3.299	-	-9.9	20	85	0
Chloroform	2.538	2.943	-	-16	20	92	0
Ethyl acetate	1.761	1.902	-	-8	20	85	0
Carbon tetrachloride	10	10.624	-	-6.2	20	87	0
Tetrahydrofuran	0.488	0.599	-	-22.7*	20	86	-.01
Dibromofluoromethane	0.222	0.241	-	-8.6	20	87	0
1,1,1-Trichloroethane	2.006	2.194	-	-9.4	20	84	0
2-Butanone	0.78	0.863	-	-10.6	20	84	0
1,1-Dichloropropene	2.054	2.098	-	-2.1	20	79	0
Benzene	6.159	6.376	-	-3.5	20	80	0
tert-Amyl methyl ether	4.072	3.612	-	11.3	20	71	0
1,2-Dichloroethane-d4	0.391	0.397	-	-1.5	20	87	0
1,2-Dichloroethane	2.102	2.343	-	-11.5	20	85	0
Methyl cyclohexane	2.764	2.662	-	3.7	20	75	0
Trichloroethene	1.41	1.423	-	-0.9	20	78	0
Dibromomethane	0.835	0.836	-	-0.1	20	78	0
1,2-Dichloropropane	1.7	1.803	-	-6.1	20	81	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117504
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/17/21 07:53
Lab File ID	: J210417A02	Init. Calib. Date(s)	: 04/06/21 04/06/21
Sample No	: WG1487632-2	Init. Calib. Times	: 06:30 15:24
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Bromodichloromethane	1.958	2.08	-	-6.2	20	83	0
1,4-Dioxane	0.012	0.016*	-	-33.3*	20	98	-.01
cis-1,3-Dichloropropene	2.539	2.574	-	-1.4	20	79	0
Chlorobenzene-d5	1	1	-	0	20	82	0
Toluene-d8	1.312	1.336	-	-1.8	20	82	0
Toluene	4.715	4.868	-	-3.2	20	79	0
4-Methyl-2-pentanone	0.788	0.69	-	12.4	20	72	0
Tetrachloroethene	1.54	1.565	-	-1.6	20	82	0
trans-1,3-Dichloropropene	3.013	3.139	-	-4.2	20	79	0
Ethyl methacrylate	2.61	2.389	-	8.5	20	73	0
1,1,2-Trichloroethane	1.482	1.503	-	-1.4	20	79	0
Chlorodibromomethane	1.493	1.501	-	-0.5	20	82	0
1,3-Dichloropropane	3.15	3.098	-	1.7	20	76	0
1,2-Dibromoethane	1.509	1.466	-	2.8	20	78	0
2-Hexanone	1.508	1.449	-	3.9	20	81	0
Chlorobenzene	4.887	4.805	-	1.7	20	78	0
Ethylbenzene	9.17	9.431	-	-2.8	20	78	0
1,1,1,2-Tetrachloroethane	1.509	1.521	-	-0.8	20	80	0
p/m Xylene	3.495	3.554	-	-1.7	20	79	0
o Xylene	3.273	3.321	-	-1.5	20	77	0
Styrene	5.609	5.815	-	-3.7	20	79	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	85	0
Bromoform	1.961	1.781	-	9.2	20	86	0
Isopropylbenzene	17.13	16.164	-	5.6	20	77	0
4-Bromofluorobenzene	1.017	0.97	-	4.6	20	81	0
Bromobenzene	3.526	3.197	-	9.3	20	82	0
n-Propylbenzene	23.023	22.494	-	2.3	20	78	0
1,4-Dichlorobutane	6.731	7.144	-	-6.1	20	82	0
1,1,2,2-Tetrachloroethane	10	10.746	-	-7.5	20	77	0
4-Ethyltoluene	16.526	15.976	-	3.3	20	77	0
2-Chlorotoluene	14.927	14.581	-	2.3	20	78	0
1,3,5-Trimethylbenzene	14.394	13.595	-	5.6	20	78	0
1,2,3-Trichloropropane	3.663	3.639	-	0.7	20	75	0
trans-1,4-Dichloro-2-buten	1.458	1.486	-	-1.9	20	79	0
4-Chlorotoluene	13.502	13.349	-	1.1	20	80	0
tert-Butylbenzene	11.747	11.211	-	4.6	20	78	0
1,2,4-Trimethylbenzene	14.075	13.142	-	6.6	20	76	0
sec-Butylbenzene	17.271	16.597	-	3.9	20	77	0
p-Isopropyltoluene	14.764	13.85	-	6.2	20	77	0
1,3-Dichlorobenzene	7.29	7.166	-	1.7	20	83	0
1,4-Dichlorobenzene	7.245	7.05	-	2.7	20	84	0
p-Diethylbenzene	8.496	7.826	-	7.9	20	78	0
n-Butylbenzene	15.567	15.003	-	3.6	20	77	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117504**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Instrument ID	**: JACK**	**Calibration Date**	**: 04/17/21 07:53**
Lab File ID	**: J210417A02**	**Init. Calib. Date(s)**	**: 04/06/21 04/06/21**
Sample No	**: WG1487632-2**	**Init. Calib. Times**	**: 06:30 15:24**
Channel	**:**		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichlorobenzene	6.684	6.478	-	3.1	20	83	0
1,2,4,5-Tetramethylbenzene	12.111	10.27	-	15.2	20	73	0
1,2-Dibromo-3-chloropropan	0.522	0.524	-	-0.4	20	86	0
1,3,5-Trichlorobenzene	4.178	3.867	-	7.4	20	85	0
Hexachlorobutadiene	1.414	1.296	-	8.3	20	84	0
1,2,4-Trichlorobenzene	3.612	3.225	-	10.7	20	85	0
Naphthalene	11.584	9.704	-	16.2	20	75	0
1,2,3-Trichlorobenzene	3.388	3.1	-	8.5	20	86	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117504		
Project Name	: NUCLEAR METALS	Project Number	: 3252H		
Instrument ID	: JACK	Calibration Date	: 04/17/21 08:13		
Lab File ID	: J210417A03	Init. Calib. Date(s)	: 04/06/21	04/06/21	
Sample No	: WG1487621-2	Init. Calib. Times	: 06:51	15:03	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	78	0
Dichlorodifluoromethane	1.063	0.641	-	39.7*	20	43	0
Chloromethane	1.777	1.759	-	1	20	67	0
Vinyl chloride	2.131	2.006	-	5.9	20	65	0
Bromomethane	10	8.805	-	12	20	62	0
Chloroethane	1.132	1.238	-	-9.4	20	72	0
Trichlorofluoromethane	1.963	1.961	-	0.1	20	71	0
Ethyl ether	0.811	0.83	-	-2.3	20	75	0
1,1-Dichloroethene	1.225	1.272	-	-3.8	20	75	0
Carbon disulfide	4.134	4.401	-	-6.5	20	75	0
Methylene chloride	1.42	1.601	-	-12.7	20	79	0
Acetone	0.421	0.52	-	-23.5*	20	86	0
trans-1,2-Dichloroethene	1.295	1.359	-	-4.9	20	77	0
Methyl tert-butyl ether	3.731	3.621	-	2.9	20	76	0
Diisopropyl ether	5.416	6.011	-	-11	20	83	0
1,1-Dichloroethane	3.15	3.626	-	-15.1	20	81	0
Ethyl tert-butyl ether	4.546	4.553	-	-0.2	20	78	0
cis-1,2-Dichloroethene	1.495	1.593	-	-6.6	20	77	0
2,2-Dichloropropane	2.269	2.474	-	-9	20	82	0
Bromochloromethane	0.579	0.624	-	-7.8	20	80	0
Chloroform	2.689	3.056	-	-13.6	20	82	0
Carbon tetrachloride	1.62	1.718	-	-6	20	77	0
Tetrahydrofuran	0.434	0.537	-	-23.7*	20	86	0
Dibromofluoromethane	0.243	0.258	-	-6.2	20	86	0
1,1,1-Trichloroethane	2.087	2.249	-	-7.8	20	78	0
2-Butanone	0.63	0.725	-	-15.1	20	89	0
1,1-Dichloropropene	2.06	2.111	-	-2.5	20	74	0
Benzene	6.094	6.208	-	-1.9	20	76	0
tert-Amyl methyl ether	3.752	3.537	-	5.7	20	74	0
1,2-Dichloroethane-d4	0.4	0.424	-	-6	20	83	0
1,2-Dichloroethane	2.172	2.416	-	-11.2	20	80	0
Trichloroethene	1.386	1.394	-	-0.6	20	75	0
Dibromomethane	0.835	0.866	-	-3.7	20	78	0
1,2-Dichloropropane	1.734	1.856	-	-7	20	79	0
Bromodichloromethane	2.051	2.149	-	-4.8	20	79	0
1,4-Dioxane	0.011	0.013*	-	-18.2	20	93	0
cis-1,3-Dichloropropene	2.48	2.546	-	-2.7	20	77	0
Chlorobenzene-d5	1	1	-	0	20	78	0
Toluene-d8	1.295	1.38	-	-6.6	20	79	0
Toluene	4.665	4.83	-	-3.5	20	76	0
4-Methyl-2-pentanone	0.633	0.636	-	-0.5	20	82	0
Tetrachloroethene	1.509	1.547	-	-2.5	20	84	0
trans-1,3-Dichloropropene	2.822	2.895	-	-2.6	20	77	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117504		
Project Name	: NUCLEAR METALS	Project Number	: 3252H		
Instrument ID	: JACK	Calibration Date	: 04/17/21 08:13		
Lab File ID	: J210417A03	Init. Calib. Date(s)	: 04/06/21	04/06/21	
Sample No	: WG1487621-2	Init. Calib. Times	: 06:51	15:03	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	1.359	1.37	-	-0.8	20	77	0
Chlorodibromomethane	1.446	1.427	-	1.3	20	80	0
1,3-Dichloropropane	2.89	2.905	-	-0.5	20	77	0
1,2-Dibromoethane	1.36	1.346	-	1	20	79	0
2-Hexanone	1.159	1.283	-	-10.7	20	83	0
Chlorobenzene	4.762	4.821	-	-1.2	20	77	0
Ethylbenzene	9.087	9.625	-	-5.9	20	75	0
1,1,1,2-Tetrachloroethane	1.447	1.447	-	0	20	81	0
p/m Xylene	3.498	3.677	-	-5.1	20	77	0
o Xylene	3.305	3.452	-	-4.4	20	75	0
Styrene	5.661	5.959	-	-5.3	20	75	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	82	0
Bromoform	10	8.425	-	15.7	20	80	0
Isopropylbenzene	17.237	16.306	-	5.4	20	74	0
4-Bromofluorobenzene	1.006	0.962	-	4.4	20	79	0
Bromobenzene	3.515	3.267	-	7.1	20	85	0
n-Propylbenzene	23.158	23.014	-	0.6	20	75	0
1,1,2,2-Tetrachloroethane	10	10.181	-	-1.8	20	78	0
2-Chlorotoluene	15.112	15.248	-	-0.9	20	78	0
1,3,5-Trimethylbenzene	14.217	13.944	-	1.9	20	77	0
1,2,3-Trichloropropane	3.239	3.298	-	-1.8	20	78	0
4-Chlorotoluene	13.612	13.511	-	0.7	20	76	0
tert-Butylbenzene	11.914	11.481	-	3.6	20	76	0
1,2,4-Trimethylbenzene	13.724	13.049	-	4.9	20	76	0
sec-Butylbenzene	17.277	17.102	-	1	20	75	0
p-Isopropyltoluene	14.39	14.067	-	2.2	20	75	0
1,3-Dichlorobenzene	7.305	7.241	-	0.9	20	81	0
1,4-Dichlorobenzene	7.308	7.053	-	3.5	20	81	0
n-Butylbenzene	14.883	14.948	-	-0.4	20	77	0
1,2-Dichlorobenzene	6.648	6.511	-	2.1	20	82	0
1,2-Dibromo-3-chloropropan	0.466	0.431	-	7.5	20	83	0
Hexachlorobutadiene	10	10.017	-	-0.2	20	87	0
1,2,4-Trichlorobenzene	10	9.541	-	4.6	20	83	0
Naphthalene	8.515	7.546	-	11.4	20	77	0
1,2,3-Trichlorobenzene	2.936	2.682	-	8.7	20	83	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117504
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/19/21 01:54
Lab File ID	: VQ210419A01	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1487906-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	96	0
Dichlorodifluoromethane	0.715	0.564	-	21.1*	20	70	0
Chloromethane	1.089	0.974	-	10.6	20	81	0
Vinyl chloride	0.844	0.742	-	12.1	20	78	0
Bromomethane	0.461	0.45	-	2.4	20	89	0
Chloroethane	0.521	0.468	-	10.2	20	81	0
Trichlorofluoromethane	1.198	1.039	-	13.3	20	79	0
Ethyl ether	0.275	0.244	-	11.3	20	83	0
1,1-Dichloroethene	0.654	0.501	-	23.4*	20	70	0
Carbon disulfide	1.842	1.417	-	23.1*	20	71	0
Methylene chloride	0.709	0.637	-	10.2	20	82	0
Acetone	10	10.594	-	-5.9	20	103	0
trans-1,2-Dichloroethene	0.781	0.649	-	16.9	20	76	0
Methyl tert-butyl ether	1.417	1.312	-	7.4	20	88	0
Diisopropyl ether	2.883	2.768	-	4	20	90	0
1,1-Dichloroethane	1.547	1.412	-	8.7	20	83	0
Ethyl tert-butyl ether	2.062	1.926	-	6.6	20	88	0
cis-1,2-Dichloroethene	0.828	0.715	-	13.6	20	79	0
2,2-Dichloropropane	1.253	1.226	-	2.2	20	90	0
Bromochloromethane	0.339	0.3	-	11.5	20	81	0
Chloroform	1.426	1.271	-	10.9	20	82	0
Carbon tetrachloride	1.277	1.109	-	13.2	20	78	0
Tetrahydrofuran	0.171	0.171	-	0	20	96	0
Dibromofluoromethane	0.291	0.272	-	6.5	20	88	0
1,1,1-Trichloroethane	1.461	1.271	-	13	20	80	0
2-Butanone	0.19	0.205	-	-7.9	20	99	0
1,1-Dichloropropene	1.115	0.971	-	12.9	20	80	0
Benzene	3.027	2.681	-	11.4	20	80	0
tert-Amyl methyl ether	1.521	1.407	-	7.5	20	87	0
1,2-Dichloroethane-d4	0.282	0.295	-	-4.6	20	104	0
1,2-Dichloroethane	0.858	0.85	-	0.9	20	92	0
Trichloroethene	0.896	0.746	-	16.7	20	79	0
Dibromomethane	0.344	0.321	-	6.7	20	85	0
1,2-Dichloropropane	0.753	0.7	-	7	20	85	0
Bromodichloromethane	0.987	0.902	-	8.6	20	85	0
1,4-Dioxane	0.00307	0.00351*	-	-14.3	20	108	0
cis-1,3-Dichloropropene	1.059	1.014	-	4.2	20	89	0
Chlorobenzene-d5	1	1	-	0	20	74	0
Toluene-d8	1.077	1.197	-	-11.1	20	83	0
Toluene	1.629	1.807	-	-10.9	20	78	0
4-Methyl-2-pentanone	10	10.974	-	-9.7	20	94	0
Tetrachloroethene	0.709	0.715	-	-0.8	20	72	0
trans-1,3-Dichloropropene	0.736	0.891	-	-21.1*	20	89	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117504	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: QUIMBY	Calibration Date	: 04/19/21 01:54	
Lab File ID	: VQ210419A01	Init. Calib. Date(s)	: 04/11/21	04/11/21
Sample No	: WG1487906-2	Init. Calib. Times	: 16:44	21:47
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.325	0.39	-	-20	20	87	0
Chlorodibromomethane	0.512	0.57	-	-11.3	20	81	0
1,3-Dichloropropane	0.692	0.822	-	-18.8	20	87	0
1,2-Dibromoethane	0.368	0.418	-	-13.6	20	84	0
2-Hexanone	10	11.269	-	-12.7	20	96	0
Chlorobenzene	1.757	1.926	-	-9.6	20	78	0
Ethylbenzene	3.145	3.625	-	-15.3	20	78	0
1,1,1,2-Tetrachloroethane	0.626	0.69	-	-10.2	20	80	0
p/m Xylene	20	20.001	-	-0	20	74	0
o Xylene	20	20.284	-	-1.4	20	75	0
Styrene	20	20.956	-	-4.8	20	78	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	69	0
Bromoform	0.517	0.652	-	-26.1*	20	83	0
Isopropylbenzene	6.172	7.404	-	-20	20	75	0
4-Bromofluorobenzene	0.997	1.077	-	-8	20	74	0
Bromobenzene	1.257	1.488	-	-18.4	20	77	0
n-Propylbenzene	6.845	7.997	-	-16.8	20	76	0
1,1,2,2-Tetrachloroethane	0.764	1.04	-	-36.1*	20	89	0
2-Chlorotoluene	4.764	5.79	-	-21.5*	20	79	0
1,3,5-Trimethylbenzene	3.876	4.445	-	-14.7	20	76	0
1,2,3-Trichloropropane	0.635	0.912	-	-43.6*	20	94	0
4-Chlorotoluene	4.01	4.785	-	-19.3	20	79	0
tert-Butylbenzene	4.263	4.741	-	-11.2	20	72	0
1,2,4-Trimethylbenzene	3.462	4.063	-	-17.4	20	78	0
sec-Butylbenzene	5.424	6.181	-	-14	20	74	0
p-Isopropyltoluene	10	9.928	-	0.7	20	73	0
1,3-Dichlorobenzene	2.441	2.837	-	-16.2	20	76	0
1,4-Dichlorobenzene	2.306	2.618	-	-13.5	20	76	0
n-Butylbenzene	10	10.978	-	-9.8	20	79	0
1,2-Dichlorobenzene	2.108	2.502	-	-18.7	20	78	0
1,2-Dibromo-3-chloropropan	0.11	0.128	-	-16.4	20	77	0
Hexachlorobutadiene	0.787	0.782	-	0.6	20	69	0
1,2,4-Trichlorobenzene	0.939	1.041	-	-10.9	20	79	0
Naphthalene	1.416	1.679	-	-18.6	20	78	0
1,2,3-Trichlorobenzene	0.783	0.966	-	-23.4*	20	80	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117504
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/21/21 05:14
Lab File ID	: J210421A01	Init. Calib. Date(s)	: 04/20/21 04/20/21
Sample No	: WG1489044-2	Init. Calib. Times	: 06:07 12:57
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	105	0
Dichlorodifluoromethane	1.542	1.665	-	-8	20	100	0
Chloromethane	2.252	2.389	-	-6.1	20	106	-.01
Vinyl chloride	1.971	2.124	-	-7.8	20	101	0
Bromomethane	10	10.113	-	-1.1	20	100	0
Chloroethane	1.198	1.312	-	-9.5	20	105	0
Trichlorofluoromethane	2.788	2.978	-	-6.8	20	102	0
Ethyl ether	0.889	0.843	-	5.2	20	96	0
1,1-Dichloroethene	1.608	1.745	-	-8.5	20	106	0
Carbon disulfide	4.761	5.022	-	-5.5	20	103	0
Freon-113	1.7	1.719	-	-1.1	20	98	0
Iodomethane	10	9.435	-	5.6	20	125	0
Acrolein	0.207	0.201	-	2.9	20	105	0
Methylene chloride	1.728	1.893	-	-9.5	20	108	0
Acetone	0.545	0.512	-	6.1	20	96	-.01
trans-1,2-Dichloroethene	1.648	1.793	-	-8.8	20	108	0
Methyl acetate	1.373	1.189	-	13.4	20	87	0
Methyl tert-butyl ether	4.021	3.552	-	11.7	20	94	0
tert-Butyl alcohol	0.114	0.095	-	16.7	20	88	0
Diisopropyl ether	6.261	5.858	-	6.4	20	99	0
1,1-Dichloroethane	3.488	3.659	-	-4.9	20	102	0
Halothane	1.371	1.396	-	-1.8	20	99	-.01
Acrylonitrile	0.624	0.57	-	8.7	20	91	0
Ethyl tert-butyl ether	4.857	4.333	-	10.8	20	93	0
Vinyl acetate	4.497	3.74	-	16.8	20	93	0
cis-1,2-Dichloroethene	1.889	1.994	-	-5.6	20	105	0
2,2-Dichloropropane	2.736	2.898	-	-5.9	20	109	0
Bromochloromethane	0.897	0.947	-	-5.6	20	104	0
Cyclohexane	3.267	3.305	-	-1.2	20	95	0
Chloroform	3.289	3.465	-	-5.4	20	101	0
Ethyl acetate	1.775	1.365	-	23.1*	20	82	0
Carbon tetrachloride	2.644	2.586	-	2.2	20	98	0
Tetrahydrofuran	0.539	0.473	-	12.2	20	88	-.01
Dibromofluoromethane	0.29	0.29	-	0	20	112	0
1,1,1-Trichloroethane	2.893	2.986	-	-3.2	20	103	0
2-Butanone	0.765	0.593	-	22.5*	20	79	0
1,1-Dichloropropene	2.301	2.29	-	0.5	20	99	0
Benzene	6.631	6.56	-	1.1	20	100	0
tert-Amyl methyl ether	3.944	3.453	-	12.4	20	95	0
1,2-Dichloroethane-d4	0.391	0.333	-	14.8	20	96	0
1,2-Dichloroethane	2.572	2.451	-	4.7	20	97	0
Methyl cyclohexane	3.073	3.098	-	-0.8	20	104	0
Trichloroethene	1.748	1.725	-	1.3	20	98	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117504	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/21/21 05:14	
Lab File ID	: J210421A01	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1489044-2	Init. Calib. Times	: 06:07	12:57
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	1.104	1.038	-	6	20	98	0
1,2-Dichloropropane	1.79	1.72	-	3.9	20	100	0
2-Chloroethyl vinyl ether	0.967	0.783	-	19	20	97	0
Bromodichloromethane	2.457	2.35	-	4.4	20	96	0
1,4-Dioxane	0.012	0.013*	-	-8.3	20	112	-.01
cis-1,3-Dichloropropene	2.784	2.634	-	5.4	20	97	0
Chlorobenzene-d5	1	1	-	0	20	105	0
Toluene-d8	1.15	1.194	-	-3.8	20	108	0
Toluene	4.965	5.05	-	-1.7	20	102	0
4-Methyl-2-pentanone	0.596	0.442	-	25.8*	20	83	0
Tetrachloroethene	2.321	2.372	-	-2.2	20	104	0
trans-1,3-Dichloropropene	10	8.964	-	10.4	20	94	0
Ethyl methacrylate	2.129	1.869	-	12.2	20	89	0
1,1,2-Trichloroethane	1.356	1.176	-	13.3	20	90	0
Chlorodibromomethane	1.961	1.733	-	11.6	20	92	0
1,3-Dichloropropane	2.782	2.547	-	8.4	20	94	0
1,2-Dibromoethane	1.63	1.473	-	9.6	20	93	0
2-Hexanone	1.263	0.965	-	23.6*	20	80	0
Chlorobenzene	5.757	5.976	-	-3.8	20	106	0
Ethylbenzene	9.387	10.29	-	-9.6	20	103	0
1,1,1,2-Tetrachloroethane	1.992	1.901	-	4.6	20	102	0
p/m Xylene	3.789	4.235	-	-11.8	20	103	0
o Xylene	3.595	4.039	-	-12.4	20	106	0
Styrene	20	20.938	-	-4.7	20	101	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	109	0
Bromoform	2.359	1.825	-	22.6*	20	93	0
Isopropylbenzene	17.473	16.971	-	2.9	20	103	0
4-Bromofluorobenzene	0.8	0.761	-	4.9	20	107	0
Bromobenzene	4.366	3.991	-	8.6	20	103	0
n-Propylbenzene	21.642	21.303	-	1.6	20	101	0
1,4-Dichlorobutane	5.544	4.58	-	17.4	20	90	0
1,1,2,2-Tetrachloroethane	3.387	2.507	-	26*	20	83	0
4-Ethyltoluene	16.921	17.068	-	-0.9	20	105	0
2-Chlorotoluene	14.23	13.971	-	1.8	20	100	0
1,3,5-Trimethylbenzene	14.552	14.141	-	2.8	20	103	0
1,2,3-Trichloropropane	3.058	2.354	-	23*	20	87	0
trans-1,4-Dichloro-2-buten	1.252	0.986	-	21.2*	20	84	0
4-Chlorotoluene	13.04	12.621	-	3.2	20	103	0
tert-Butylbenzene	12.872	13.045	-	-1.3	20	105	0
1,2,4-Trimethylbenzene	13.954	13.371	-	4.2	20	102	0
sec-Butylbenzene	17.612	17.697	-	-0.5	20	103	0
p-Isopropyltoluene	10	9.685	-	3.1	20	106	0
1,3-Dichlorobenzene	8.882	8.592	-	3.3	20	104	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2117504		
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H		
Instrument ID	: JACK	**Calibration Date**	: 04/21/21 05:14		
Lab File ID	: J210421A01	**Init. Calib. Date(s)**	: 04/20/21	04/20/21	
Sample No	: WG1489044-2	**Init. Calib. Times**	: 06:07	12:57	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	8.812	8.488	-	3.7	20	104	0
p-Diethylbenzene	9.399	8.909	-	5.2	20	106	0
n-Butylbenzene	14.08	13.864	-	1.5	20	102	0
1,2-Dichlorobenzene	8.245	7.648	-	7.2	20	102	0
1,2,4,5-Tetramethylbenzene	10	9.038	-	9.6	20	107	0
1,2-Dibromo-3-chloropropan	0.605	0.508	-	16	20	92	0
1,3,5-Trichlorobenzene	5.579	5.364	-	3.9	20	108	0
Hexachlorobutadiene	2.239	2.208	-	1.4	20	106	0
1,2,4-Trichlorobenzene	4.502	4.331	-	3.8	20	113	0
Naphthalene	10.045	8.831	-	12.1	20	105	0
1,2,3-Trichlorobenzene	4.247	3.976	-	6.4	20	109	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L2117869
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	3252H
Report Date:	05/24/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2117869-01	MW-S02-04072021	WATER	CONCORD, MA	04/07/21 15:40	04/08/21
L2117869-02	MW-S02-04072021 DUP	WATER	CONCORD, MA	04/07/21 15:45	04/08/21
L2117869-03	MW-BS46-04072021	WATER	CONCORD, MA	04/07/21 16:15	04/08/21
L2117869-04	MW-S08-04072021	WATER	CONCORD, MA	04/07/21 17:40	04/08/21
L2117869-05	MW-BS51-04072021	WATER	CONCORD, MA	04/07/21 17:35	04/08/21
L2117869-06	MW-S16-04072021	WATER	CONCORD, MA	04/07/21 17:40	04/08/21
L2117869-07	MW-S19-04082021	WATER	CONCORD, MA	04/08/21 09:10	04/08/21
L2117869-08	TRIP BLANK1-04082021	WATER	CONCORD, MA	04/08/21 00:00	04/08/21
L2117869-09	MW-BS02-04082021	WATER	CONCORD, MA	04/08/21 09:30	04/08/21
L2117869-10	MW-SD46-04082021	WATER	CONCORD, MA	04/08/21 10:15	04/08/21
L2117869-11	MW-T24-04082021	WATER	CONCORD, MA	04/08/21 10:30	04/08/21
L2117869-12	MW-BS7-2-04082021	WATER	CONCORD, MA	04/08/21 10:25	04/08/21
L2117869-13	MW-S21-04082021	WATER	CONCORD, MA	04/08/21 11:30	04/08/21
L2117869-14	ML-1-2-04082021	WATER	CONCORD, MA	04/08/21 09:35	04/08/21
L2117869-15	GZW-7-2-04082021	WATER	CONCORD, MA	04/08/21 12:00	04/08/21
L2117869-16	EQ BLANK1-04082021	WATER	CONCORD, MA	04/08/21 14:00	04/08/21
L2117869-17	MW-BS34-04082021	WATER	CONCORD, MA	04/08/21 10:45	04/08/21
L2117869-18	MW-SD43-04082021	WATER	CONCORD, MA	04/08/21 13:25	04/08/21
L2117869-19	MW-S64-04082021	WATER	CONCORD, MA	04/08/21 14:00	04/08/21
L2117869-20	MW-BS21-04082021	WATER	CONCORD, MA	04/08/21 14:15	04/08/21
L2117869-21	MW-SD34-04082021	WATER	CONCORD, MA	04/08/21 14:20	04/08/21
L2117869-22	MW-SD34-04082021DUP	WATER	CONCORD, MA	04/08/21 14:25	04/08/21
L2117869-23	FIELD BLANK1-04082021	WATER	CONCORD, MA	04/08/21 14:20	04/08/21
L2117869-24	BEW-1-04082021	WATER	CONCORD, MA	04/08/21 15:10	04/08/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2117869-25	ML-1-3-04082021	WATER	CONCORD, MA	04/08/21 15:38	04/08/21
L2117869-26	MW-S38-04082021	WATER	CONCORD, MA	04/08/21 16:10	04/08/21
L2117869-27	HA20-CMT-2S-04082021	WATER	CONCORD, MA	04/08/21 15:00	04/08/21

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Revision

May 24, 2021: This report includes the results of the Bromide analysis performed on L2117869-01, -02, -06, -09, -12, -13, -15, -16, -19, -20, -26, and -27.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Sample Receipt

L2117869-22: Headspace was noted in all sample containers submitted for Volatile Organics. The analysis was cancelled at the client's request.

L2117869-24: The collection date and time on the chain of custody was 08-APR-21 15:10; however, the collection date/time on the container label was 08-APR-21 15:40. At the client's request, the collection date/time is reported as 08-APR-21 15:10.

Volatile Organics

L2117869-01 through -21 and -24 through -27: Initial calibration utilized a quadratic fit for: n-butylbenzene, p-isopropyltoluene

In reference to question H:

The WG1487775-3/-4 LCS/LCSD recoveries, associated with L2117869-01 through -16, are below the individual acceptance criteria for bromomethane (68%/69%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

The WG1488231-3/-4 LCS/LCSD recoveries, associated with L2117869-17, -18, -20, -21, -24, and -25, are below the individual acceptance criteria for dichlorodifluoromethane (69%/69%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a

Case Narrative (continued)

potentially low bias for these compounds.
The WG1488309-3/-4 LCS/LCSD recoveries, associated with L2117869-19, are above the individual acceptance criteria for 1,1,2,2-tetrachloroethane (LCSD 140%) and 1,2,3-trichloropropane (140%/150%), but within the overall method allowances. The results of the associated sample are reported; however, all positive detects are considered to have a potentially high bias for these compounds.
The WG1488695-3/-4 LCS/LCSD recoveries, associated with L2117869-26 and -27, are above the individual acceptance criteria for 1,1,2,2-tetrachloroethane (LCSD 140%) and 1,2,3-trichloropropane (140%/140%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for these compounds.
L2117869-01 through -21, -24 through -27: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0025)
Average Response Factor: 1,4-dioxane
L2117869-01 through -16: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

Semivolatile Organics
L2117869-04, -05, -05RE, -07, -10 through -16, -18, -18RE, -19, -27, WG1486007-1, WG1486645-1, WG1489093-1, WG1486007-2/-3, WG1486645-2/-3, and WG1486113-4/-5: The initial calibration utilized a quadratic fit for butyl benzyl phthalate, bis(2-ethylhexyl)phthalate, and di-n-octylphthalate.
WG1486113-1, WG1486113-2/-3, and WG1489093-2/3: The initial calibration utilized a quadratic fit for benzo(ghi)perylene.
In reference to question H:
L2117869-05: The surrogate recoveries were outside the acceptance criteria for 2-fluorophenol (3%) and phenol-d6 (2%); however, re-extraction outside of holding time achieved similar results: 2-fluorophenol (1%), phenol-d6 (0%), and 2,4,6-tribromophenol (6%). The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

Case Narrative (continued)

L2117869-11: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (115%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
L2117869-12: One or more of the internal standard recoveries is outside the acceptance criteria; however, the internal standard is within criteria for the target compounds; therefore, the results are reported.
L2117869-14: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (111%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
L2117869-18: The surrogate recovery was outside the acceptance criteria for 2,4,6-tribromophenol (7%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.
L2117869-21: The surrogate recovery is outside the individual acceptance criteria for nitrobenzene-d5 (29%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The WG1486007-2/-3 LCS/LCSD recoveries, associated with L2117869-01 through -05, are below the individual acceptance criteria for 3,3'-dichlorobenzidine (LCS 27%), aniline (16%/39%), and 4-chloroaniline (LCS 30%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.
The WG1486007-2/-3 LCS/LCSD RPDs, associated with L2117869-01 through -05, are above the acceptance criteria for 1,4-dichlorobenzene (22%), 3,3'-dichlorobenzidine (74%), bis(2-chloroisopropyl)ether (21%), hexachlorobutadiene (22%), hexachloroethane (23%), naphthalene (24%), nitrobenzene (25%), aniline (84%), 4-chloroaniline (31%), acetophenone (22%), 2-chlorophenol (26%), 2,4-dimethylphenol (34%), 2-nitrophenol (24%), phenol (30%), 2-methylphenol (24%), and 3-methylphenol/4-methylphenol (21%).
The WG1486113-2/-3 LCS/LCSD recoveries, associated with L2117869-06, -09, -10, -11, -14, -16 through -22, -24, -25, and -26, are below the individual acceptance criteria for aniline (32%/35%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

Case Narrative (continued)

The WG1486113-2/-3 LCS/LCSD RPDs, associated with L2117869-06, -09, -10, -11, -14, -16 through -22, -24, -25, and -26, are above the acceptance criteria for 1,2,4-trichlorobenzene (21%), bis(2-chloroethyl)ether (23%), 2-chloronaphthalene (29%), 1,2-dichlorobenzene (31%), 1,3-dichlorobenzene (21%), 3,3'-dichlorobenzidine (24%), 2,6-dinitrotoluene (24%), bis(2-chloroisopropyl)ether (30%), hexachlorobutadiene (24%), hexachloroethane (28%), isophorone (28%), nitrobenzene (41%), dimethyl phthalate (22%), acenaphthylene (27%), dibenzofuran (21%), 2-methylnaphthalene (32%), acetophenone (26%), 2,4,6-trichlorophenol (24%), 2-chlorophenol (29%), 2,4-dichlorophenol (29%), 2-nitrophenol (29%), 2-methylphenol (24%), and 3-methylphenol/4-methylphenol (24%).

The surrogate recoveries for the WG1486113-4 LCSD, associated with L2117869-06, -09, -10, -11, -14, -16 through -22, -24, -25, and -26, are outside the acceptance criteria for 2-fluorophenol (111%) and 2,4,6-tribromophenol (129%).

The WG1486645-2/-3 LCS/LCSD recoveries, associated with L2117869-07, -12, -13, -15, and -27, are below the individual acceptance criteria for aniline (27%/27%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1486645-2/-3 LCS/LCSD RPD, associated with L2117869-07, -12, -13, -15, and -27, is above the acceptance criteria for 2,4-dimethylphenol (38%).

The WG1489093-2 LCS recovery, associated with L2117869-05RE and -18RE, is below the individual acceptance criteria for aniline (17%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1489093-2/-3 LCS/LCSD RPDs, associated with L2117869-05RE and -18RE, are above the acceptance criteria for 3,3'-dichlorobenzidine (46%), benzo(a)pyrene (23%), benzo(k)fluoranthene (24%), benzo(ghi)perylene (32%), dibenzo(a,h)anthracene (27%), indeno(1,2,3-cd)pyrene (36%), aniline (97%), and 4-chloroaniline (41%).

The surrogate recoveries for the WG1489093-2/-3 LCS/LCSD, associated with L2117869-05RE and -18RE, are outside the individual acceptance criteria for 2,4,6-tribromophenol (123$/135%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are

Case Narrative (continued)

considered to have a potential bias.

The WG1486113-4/-5 MS/MSD recoveries, performed on L2117869-19, are outside the acceptance criteria for aniline (15%/17%) and 4-chloroaniline (36%/37%).

The surrogate recoveries for the WG1486113-4/-5 MS/MSD, performed on L2117869-19, are outside the individual acceptance criteria for 2,4,6-tribromophenol (115%/120%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Semivolatile Organics by SIM

L2117869-01 through -05, -05RE, -07, -13, -15, -18RE, -27, WG1486021-1, WG1486116-1, WG1486647-1, WG1489095-1, WG1486021-2/-3, WG1486116-2/-3, WG1486647-2/-3, and WG1489095-2/-3: The initial calibration utilized a quadratic fit for pentachlorophenol.

In reference to question H:

L2117869-05: The surrogate recoveries were outside the acceptance criteria for 2-fluorophenol (3%) and phenol-d6 (2%); however, re-extraction outside of holding time achieved similar results: 2-fluorophenol (1%), phenol-d6 (0%), and 2,4,6-tribromophenol (6%). The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recovery for the following samples is outside the individual acceptance criteria for 2,4,6-tribromophenol, but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias:

L2117869-10: 139%

L2117869-11: 142%

L2117869-14: 165%

L2117869-16: 130%

L2117869-17: 155%

L2117869-19: 113%

L2117869-20: 122%

Case Narrative (continued)

L2117869-22: 129%
L2117869-25: 150%
L2117869-26: 119%

L2117869-12: The surrogate recovery is outside the individual acceptance criteria for phenol-d6 (14%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
L2117869-18: The surrogate recovery was outside the acceptance criteria for 2,4,6-tribromophenol (9%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.
L2117869-21: The surrogate recovery is outside the individual acceptance criteria for nitrobenzene-d5 (25%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The WG1486021-2 LCS recovery, associated with L2117869-01 through -04, is above the individual acceptance criteria for benzo(k)fluoranthene (141%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for these compounds.
The surrogate recoveries for the WG1486021-2/-3 LCS/LCSD, associated with L2117869-01 through -04, are outside the individual acceptance criteria for 2,4,6-tribromophenol (127%/121%) and 4-terphenyl-d14 (137%/134%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The WG1486116-2/-3 LCS/LCSD RPD, associated with L2117869-06, -09, -10, -11, -14, -16, -17, -18, -18RE, -19 through -22, -24, -25, and -26, is above the acceptance criteria for pentachlorophenol (24%).
The surrogate recovery for the WG1486647-2 LCS, associated with L2117869-07, -12, -13, -15, and -27, is outside the individual acceptance criteria for 2,4,6-tribromophenol (112%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Case Narrative (continued)

The WG1486116-5 MSD recovery, performed on L2117869-19, is outside the acceptance criteria for pentachlorophenol (140%).
The WG1486116-4/-5 MS/MSD RPDs, performed on L2117869-19, are outside the acceptance criteria for benzo(b)fluoranthene (21%) and anthracene (21%).
The surrogate recoveries for the WG1486116-4/-5 MS/MSD, performed on L2117869-19, are outside the individual acceptance criteria for 2,4,6-tribromophenol (150%/170%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Non-MCP Related Narratives
Perfluorinated Alkyl Acids by Isotope Dilution
L2117869-12R and WG1485193-3: The sample was re-analyzed due to QC failures in the original analysis. The results of the re-analysis are reported.
L2117869-12, -13, -15RE, -16RE, -17RE, -20RE, -21RE, -22RE, -23, WG1485193-3, and WG1485193-4: The MeOH fraction of the extraction is reported for the following compounds: Perfluorooctanesulfonamide (FOSA), N-Methyl Perfluorooctane Sulfonamide (NMeFOSA), N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA), N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE), and N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).
L2117869-12: The surrogate recovery was outside the acceptance criteria (less than 10%) for n-methyl-d3-perfluoro-1-octanesulfonamide (d3-nmefosa) (5%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
L2117869-13 and WG1485193-4: The surrogate recoveries were outside the acceptance criteria (less than 10%) for n-methyl-d3-perfluoro-1-octanesulfonamide (d3-nmefosa) (1%), n-ethyl-d5-perfluoro-1-octanesulfonamide (d5-netfosa) (1%), 2-(n-methyl-d3-perfluoro-1-octanesulfonamido)ethan-d4-ol (d7-nmefose) (5%), and 2-(n-ethyl-d5-perfluoro-1-octanesulfonamido)ethan-d4-ol (d9-netfose) (5%); however,

Case Narrative (continued)

re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
L2117869-15: The sample was centrifuged and decanted prior to extraction due to sample matrix.
L2117869-15RE, -16RE, -17RE, -20RE, -21RE, and -22RE: The sample was re-extracted within holding time due to QC failures for the MEOH fraction in the original extraction. The results of the re-extraction are reported.
L2117869-23: The surrogate recoveries were outside the acceptance criteria (less than 10%) for n-methyl-d3-perfluoro-1-octanesulfonamide (d3-nmefosa) (1%) and n-ethyl-d5-perfluoro-1-octanesulfonamide (d5-netfosa) (1%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
WG1485193-1: The surrogate recoveries were outside the acceptance criteria (less than 10%) for n-methyl-d3-perfluoro-1-octanesulfonamide (d3-nmefosa) (2%) and n-ethyl-d5-perfluoro-1-octanesulfonamide (d5-netfosa) (1%).
The WG1485193-2 LCS recovery, associated with L2117869-12R, -13, -15, -16, -17, and -20 through -23, is above the acceptance criteria for 1h,1h,2h,2h-perfluorododecanesulfonic acid (10:2fts) (190%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.
The surrogate recoveries for the WG1485193-2 LCS, associated with L2117869-12R, -13, -15, -16, -17, and -20 through -23, were outside the acceptance criteria (less than 10%) for n-methyl-d3-perfluoro-1-octanesulfonamide (d3-nmefosa) (2%) and n-ethyl-d5-perfluoro-1-octanesulfonamide (d5-netfosa) (2%).
WG1485193-3: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.
The surrogate recoveries for the WG1485193-3 MS, performed on L2117869-12, were outside the acceptance criteria (less than 10%) for 2-(n-methyl-d3-perfluoro-1-octanesulfonamido)ethan-d4-ol (d7-nmefose) (8%), n-ethyl-d5-perfluoro-1-octanesulfonamide (d5-netfosa) (6%), and n-methyl-d3-perfluoro-1-octanesulfonamide (d3-nmefosa) (3%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to

Case Narrative (continued)

have a potential bias.

Dissolved Organic Carbon
The samples were field filtered; a filter blank was not received.

Nitrogen, Nitrate
The WG1484152-4 MS recovery, performed on L2117869-19, is outside the acceptance criteria for nitrogen, nitrate (164%); however, the associated LCS recovery is within criteria. No further action was taken.
The WG1484155-4 MS recovery, performed on L2117869-22, is outside the acceptance criteria for nitrogen, nitrate (152%); however, the associated LCS recovery is within criteria. No further action was taken.

Nitrogen, Nitrite
The WG1484153-4 MS recovery, performed on L2117869-19, is outside the acceptance criteria for nitrogen, nitrite (122%); however, the associated LCS recovery is within criteria. No further action was taken.

Anions by Ion Chromatography
L2117869-12 and -15: The sample has an elevated detection limit for bromide due to the dilution required by the sample matrix.
The WG1486385-3/-4 MS/MSD recoveries, performed on L2117869-01, are outside the acceptance criteria for fluoride (84%/85%) and sulfate (86%/85%); however, the associated LCS recoveries are within criteria. No further action was taken.
The WG1486386-3/-4 MS/MSD recoveries, performed on L2117869-19, are outside the acceptance criteria for fluoride (75%/83%) and sulfate (86%/88%); however, the associated LCS recoveries are within criteria. No further action was taken.
The WG1502298-3/-4 MS/MSD recoveries, performed on L2117869-01, are outside the acceptance criteria for bromide (80%/80%); however, the associated LCS recovery is within criteria. No further action was taken.
The WG1502299-3/-4 MS/MSD recoveries, performed on L2117869-19, are outside the acceptance criteria

Case Narrative (continued)

for bromide (80%/80%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 05/24/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	Batch QC	WG1487775-3	Bromomethane	LCS	68	70-130	01-16	potential low bias
8260C	Batch QC	WG1487775-4	Bromomethane	LCSD	69	70-130	01-16	potential low bias
8260C	Batch QC	WG1488231-3	Dichlorodifluoromethane	LCS	69	70-130	17-18,20-21,24-25	potential low bias
8260C	Batch QC	WG1488231-4	Dichlorodifluoromethane	LCSD	69	70-130	17-18,20-21,24-25	potential low bias
8260C	Batch QC	WG1488309-3	1,2,3-Trichloropropane	LCS	140	70-130	19	potential high bias
8260C	Batch QC	WG1488309-4	1,1,2,2-Tetrachloroethane	LCSD	140	70-130	19	potential high bias
8260C	Batch QC	WG1488309-4	1,2,3-Trichloropropane	LCSD	150	70-130	19	potential high bias
8260C	Batch QC	WG1488695-3	1,2,3-Trichloropropane	LCS	140	70-130	26-27	potential high bias
8260C	Batch QC	WG1488695-4	1,1,2,2-Tetrachloroethane	LCSD	140	70-130	26-27	potential high bias
8260C	Batch QC	WG1488695-4	1,2,3-Trichloropropane	LCSD	140	70-130	26-27	potential high bias
MCP Semivolatile Organics - Westborough Lab								
8270D	MW-BS51-04072021	L2117869-05	2-Fluorophenol	Surrogate	3	15-110	-	potential low bias
8270D	MW-BS51-04072021	L2117869-05	Phenol-d6	Surrogate	2	15-110	-	potential low bias
8270D	MW-BS51-04072021	L2117869-05 RE	2-Fluorophenol	Surrogate	1	15-110	-	potential low bias
8270D	MW-BS51-04072021	L2117869-05 RE	Phenol-d6	Surrogate	0	15-110	-	potential low bias
8270D	MW-BS51-04072021	L2117869-05 RE	2,4,6-Tribromophenol	Surrogate	6	15-110	-	potential low bias
8270D	MW-T24-04082021	L2117869-11	2,4,6-Tribromophenol	Surrogate	115	15-110	-	potential high bias
8270D	ML-1-2-04082021	L2117869-14	2,4,6-Tribromophenol	Surrogate	111	15-110	-	potential high bias
8270D	MW-SD43-04082021	L2117869-18	2,4,6-Tribromophenol	Surrogate	7	15-110	-	potential low bias
8270D	MW-SD34-04082021	L2117869-21	Nitrobenzene-d5	Surrogate	29	30-130	-	potential low bias
8270D	Batch QC	WG1486007-2	3,3'-Dichlorobenzidine	LCS	27	40-140	01-05	potential low bias
8270D	Batch QC	WG1486007-2	Aniline	LCS	16	40-140	01-05	potential low bias
8270D	Batch QC	WG1486007-2	4-Chloroaniline	LCS	30	40-140	01-05	potential low bias
8270D	Batch QC	WG1486007-3	1,4-Dichlorobenzene	LCSD	22	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	3,3'-Dichlorobenzidine	LCSD	74	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	Bis(2-chloroisopropyl)ether	LCSD	21	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	Hexachlorobutadiene	LCSD	22	20	01-05	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC	WG1486007-3	Hexachloroethane	LCSD	23	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	Naphthalene	LCSD	24	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	Nitrobenzene	LCSD	25	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	Aniline	LCSD	39	40-140	01-05	potential low bias
8270D	Batch QC	WG1486007-3	Aniline	LCSD	84	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	4-Chloroaniline	LCSD	31	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	Acetophenone	LCSD	22	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	2-Chlorophenol	LCSD	26	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	2,4-Dimethylphenol	LCSD	34	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	2-Nitrophenol	LCSD	24	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	Phenol	LCSD	30	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	2-Methylphenol	LCSD	24	20	01-05	non-directional bias
8270D	Batch QC	WG1486007-3	3-Methylphenol/4-Methylphenol	LCSD	21	20	01-05	non-directional bias
8270D	Batch QC	WG1486113-2	Aniline	LCS	32	40-140	06,09-11,14,16-22,24-26	potential low bias
8270D	Batch QC	WG1486113-3	1,2,4-Trichlorobenzene	LCSD	21	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	Bis(2-chloroethyl)ether	LCSD	23	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	2-Chloronaphthalene	LCSD	29	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	1,2-Dichlorobenzene	LCSD	31	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	1,3-Dichlorobenzene	LCSD	21	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	3,3'-Dichlorobenzidine	LCSD	24	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	2,6-Dinitrotoluene	LCSD	24	20	06,09-	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
							11,14,16-22,24-26	
8270D	Batch QC	WG1486113-3	Bis(2-chloroisopropyl)ether	LCSD	30	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	Hexachlorobutadiene	LCSD	24	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	Hexachloroethane	LCSD	28	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	Isophorone	LCSD	28	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	Nitrobenzene	LCSD	41	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	Dimethyl phthalate	LCSD	22	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	Acenaphthylene	LCSD	27	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	Aniline	LCSD	35	40-140	06,09-11,14,16-22,24-26	potential low bias
8270D	Batch QC	WG1486113-3	Dibenzofuran	LCSD	21	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	2-Methylnaphthalene	LCSD	32	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	Acetophenone	LCSD	26	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	2,4,6-Trichlorophenol	LCSD	24	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	2-Chlorophenol	LCSD	29	20	06,09-11,14,16-22,24-26	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC	WG1486113-3	2,4-Dichlorophenol	LCSD	29	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	2-Nitrophenol	LCSD	29	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	2-Methylphenol	LCSD	24	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	3-Methylphenol/4-Methylphenol	LCSD	24	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	2,4,5-Trichlorophenol	LCSD	30	20	06,09-11,14,16-22,24-26	non-directional bias
8270D	Batch QC	WG1486113-3	2-Fluorophenol	Surrogate	111	15-110	-	potential high bias
8270D	Batch QC	WG1486113-3	2,4,6-Tribromophenol	Surrogate	129	15-110	-	potential high bias
8270D	Batch QC (L2117869-19)	WG1486113-4	Aniline	MS	15	40-140	06,09-11,14,16-22,24-26	potential low bias
8270D	Batch QC (L2117869-19)	WG1486113-4	4-Chloroaniline	MS	36	40-140	06,09-11,14,16-22,24-26	potential low bias
8270D	Batch QC (L2117869-19)	WG1486113-4	2,4,6-Tribromophenol	Surrogate	115	15-110	-	potential high bias
8270D	Batch QC (L2117869-19)	WG1486113-5	Aniline	MSD	17	40-140	06,09-11,14,16-22,24-26	potential low bias
8270D	Batch QC (L2117869-19)	WG1486113-5	4-Chloroaniline	MSD	37	40-140	06,09-11,14,16-22,24-26	potential low bias
8270D	Batch QC (L2117869-19)	WG1486113-5	2,4,6-Tribromophenol	Surrogate	120	15-110	-	potential high bias
8270D	Batch QC	WG1486645-2	Aniline	LCS	27	40-140	07,12-13,15,27	potential low bias
8270D	Batch QC	WG1486645-3	Aniline	LCSD	27	40-140	07,12-13,15,27	potential low bias
8270D	Batch QC	WG1486645-3	2,4-Dimethylphenol	LCSD	38	20	07,12-13,15,27	non-directional bias
8270D	Batch QC	WG1489093-2	Aniline	LCS	17	40-140	05,18	potential low bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC	WG1489093-2	2,4,6-Tribromophenol	Surrogate	123	15-110	-	potential high bias
8270D	Batch QC	WG1489093-3	3,3'-Dichlorobenzidine	LCSD	46	20	05,18	non-directional bias
8270D	Batch QC	WG1489093-3	Benzo(a)pyrene	LCSD	23	20	05,18	non-directional bias
8270D	Batch QC	WG1489093-3	Benzo(k)fluoranthene	LCSD	24	20	05,18	non-directional bias
8270D	Batch QC	WG1489093-3	Benzo(ghi)perylene	LCSD	32	20	05,18	non-directional bias
8270D	Batch QC	WG1489093-3	Dibenzo(a,h)anthracene	LCSD	27	20	05,18	non-directional bias
8270D	Batch QC	WG1489093-3	Indeno(1,2,3-cd)pyrene	LCSD	36	20	05,18	non-directional bias
8270D	Batch QC	WG1489093-3	Aniline	LCSD	97	20	05,18	non-directional bias
8270D	Batch QC	WG1489093-3	4-Chloroaniline	LCSD	41	20	05,18	non-directional bias
8270D	Batch QC	WG1489093-3	2,4,6-Tribromophenol	Surrogate	135	15-110	-	potential high bias
MCP Semivolatile Organics by SIM - Westborough Lab								
8270D-SIM	MW-BS51-04072021	L2117869-05	2-Fluorophenol	Surrogate	3	15-110	-	potential low bias
8270D-SIM	MW-BS51-04072021	L2117869-05	Phenol-d6	Surrogate	2	15-110	-	potential low bias
8270D-SIM	MW-BS51-04072021	L2117869-05 RE	2-Fluorophenol	Surrogate	1	15-110	-	potential low bias
8270D-SIM	MW-BS51-04072021	L2117869-05 RE	Phenol-d6	Surrogate	0	15-110	-	potential low bias
8270D-SIM	MW-BS51-04072021	L2117869-05 RE	2,4,6-Tribromophenol	Surrogate	6	15-110	-	potential low bias
8270D-SIM	MW-SD46-04082021	L2117869-10	2,4,6-Tribromophenol	Surrogate	139	15-110	-	potential high bias
8270D-SIM	MW-T24-04082021	L2117869-11	2,4,6-Tribromophenol	Surrogate	142	15-110	-	potential high bias
8270D-SIM	MW-BS7-2-04082021	L2117869-12	Phenol-d6	Surrogate	14	15-110	-	potential low bias
8270D-SIM	ML-1-2-04082021	L2117869-14	2,4,6-Tribromophenol	Surrogate	165	15-110	-	potential high bias
8270D-SIM	EQ BLANK1-04082021	L2117869-16	2,4,6-Tribromophenol	Surrogate	130	15-110	-	potential high bias
8270D-SIM	MW-BS34-04082021	L2117869-17	2,4,6-Tribromophenol	Surrogate	155	15-110	-	potential high bias
8270D-SIM	MW-SD43-04082021	L2117869-18	2,4,6-Tribromophenol	Surrogate	9	15-110	-	potential low bias
8270D-SIM	MW-S64-04082021	L2117869-19	2,4,6-Tribromophenol	Surrogate	113	15-110	-	potential high bias
8270D-SIM	MW-BS21-04082021	L2117869-20	2,4,6-Tribromophenol	Surrogate	122	15-110	-	potential high bias
8270D-SIM	MW-SD34-04082021	L2117869-21	Nitrobenzene-d5	Surrogate	25	30-130	-	potential low bias
8270D-SIM	MW-SD34-04082021DUP	L2117869-22	2,4,6-Tribromophenol	Surrogate	129	15-110	-	potential high bias
8270D-SIM	ML-1-3-04082021	L2117869-25	2,4,6-Tribromophenol	Surrogate	150	15-110	-	potential high bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D-SIM	MW-S38-04082021	L2117869-26	2,4,6-Tribromophenol	Surrogate	119	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1486021-2	Benzo(k)fluoranthene	LCS	141	40-140	01-05	potential high bias
8270D-SIM	Batch QC	WG1486021-2	2,4,6-Tribromophenol	Surrogate	127	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1486021-2	4-Terphenyl-d14	Surrogate	137	30-130	-	potential high bias
8270D-SIM	Batch QC	WG1486021-3	2,4,6-Tribromophenol	Surrogate	121	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1486021-3	4-Terphenyl-d14	Surrogate	134	30-130	-	potential high bias
8270D-SIM	Batch QC	WG1486116-3	Pentachlorophenol	LCSD	24	20	06,09-11,14,16-22,24-26	non-directional bias
8270D-SIM	Batch QC (L2117869-19)	WG1486116-4	2,4,6-Tribromophenol	Surrogate	150	15-110	-	potential high bias
8270D-SIM	Batch QC (L2117869-19)	WG1486116-5	Benzo(b)fluoranthene	MSD	21	20	06,09-11,14,16-22,24-26	non-directional bias
8270D-SIM	Batch QC (L2117869-19)	WG1486116-5	Anthracene	MSD	21	20	06,09-11,14,16-22,24-26	non-directional bias
8270D-SIM	Batch QC (L2117869-19)	WG1486116-5	Pentachlorophenol	MSD	140	30-130	06,09-11,14,16-22,24-26	potential high bias
8270D-SIM	Batch QC (L2117869-19)	WG1486116-5	2,4,6-Tribromophenol	Surrogate	170	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1486647-2	2,4,6-Tribromophenol	Surrogate	112	15-110	-	potential high bias
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab								
LCMSMS-ID	Batch QC	WG1485193-2	1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	LCS	190	81-188	12-13,15-17,20-23	potential high bias
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2117869-01)	WG1486385-3	Fluoride	MS	84	90-110	01-02,06,09,12-13	potential low bias
300.0	Batch QC (L2117869-01)	WG1486385-3	Sulfate	MS	86	90-110	01-02,06,09,12-13	potential low bias
300.0	Batch QC (L2117869-01)	WG1486385-4	Fluoride	MSD	85	90-110	01-02,06,09,12-13	potential low bias
300.0	Batch QC (L2117869-01)	WG1486385-4	Sulfate	MSD	85	90-110	01-	potential low bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2117869

Report Date: 05/24/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
							02,06,09,12 -13	
300.0	Batch QC (L2117869-19)	WG1486386-3	Fluoride	MS	75	90-110	15-16,19-20,24,26-27	potential low bias
300.0	Batch QC (L2117869-19)	WG1486386-3	Sulfate	MS	86	90-110	15-16,19-20,24,26-27	potential low bias
300.0	Batch QC (L2117869-19)	WG1486386-4	Fluoride	MSD	83	90-110	15-16,19-20,24,26-27	potential low bias
300.0	Batch QC (L2117869-19)	WG1486386-4	Sulfate	MSD	88	90-110	15-16,19-20,24,26-27	potential low bias
300.0	Batch QC (L2117869-01)	WG1502298-3	Bromide	MS	80	90-110	01-02,06,09,12 -13,15-16	potential low bias
300.0	Batch QC (L2117869-01)	WG1502298-4	Bromide	MSD	80	90-110	01-02,06,09,12 -13,15-16	potential low bias
300.0	Batch QC (L2117869-19)	WG1502299-3	Bromide	MS	80	90-110	19-20,26-27	potential low bias
300.0	Batch QC (L2117869-19)	WG1502299-4	Bromide	MSD	80	90-110	19-20,26-27	potential low bias
General Chemistry - Westborough Lab								
353.2	Batch QC (L2117869-19)	WG1484152-4	Nitrogen, Nitrate	MS	164	83-113	16,18-21	potential high bias
353.2	Batch QC (L2117869-19)	WG1484153-4	Nitrogen, Nitrite	MS	122	80-120	16,18-21	potential high bias
353.2	Batch QC (L2117869-22)	WG1484155-4	Nitrogen, Nitrate	MS	152	83-113	22,24-27	potential high bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-01
Client ID: MW-S02-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 06:56
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	0.48	J	ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-01	Date Collected:	04/07/21 15:40
Client ID:	MW-S02-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.25	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-01	Date Collected:	04/07/21 15:40
Client ID:	MW-S02-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	95		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-02
Client ID: MW-S02-04072021 DUP
Sample Location: CONCORD, MA
Date Collected: 04/07/21 15:45
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 07:26
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	0.50	J	ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-02	Date Collected:	04/07/21 15:45
Client ID:	MW-S02-04072021 DUP	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.25	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-02	Date Collected:	04/07/21 15:45
Client ID:	MW-S02-04072021 DUP	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	94		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117869

Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-03
Client ID: MW-BS46-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 16:15
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 07:56
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-03	Date Collected:	04/07/21 16:15
Client ID:	MW-BS46-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-03	Date Collected:	04/07/21 16:15
Client ID:	MW-BS46-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	97		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-04	Date Collected:	04/07/21 17:40
Client ID:	MW-S08-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 08:26
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-04
Client ID: MW-S08-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:40
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-04 Date Collected: 04/07/21 17:40

Client ID: MW-S08-04072021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	96		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-05
Client ID: MW-BS51-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 08:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	1.2		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.20	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-05 Date Collected: 04/07/21 17:35
Client ID: MW-BS51-04072021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.74	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	3.1		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	3.1		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	11		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-05	Date Collected:	04/07/21 17:35
Client ID:	MW-BS51-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	97		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-06	Date Collected:	04/07/21 17:40
Client ID:	MW-S16-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 09:27
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.3		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-06
Client ID: MW-S16-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-06
Client ID: MW-S16-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 17:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	97		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-07
Client ID: MW-S19-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:10
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 09:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-07 Date Collected: 04/08/21 09:10
Client ID: MW-S19-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-07	Date Collected:	04/08/21 09:10
Client ID:	MW-S19-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	98		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-08 Date Collected: 04/08/21 00:00
Client ID: TRIP BLANK1-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 05:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-08	Date Collected:	04/08/21 00:00
Client ID:	TRIP BLANK1-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-08
Client ID: TRIP BLANK1-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 00:00
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	96		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-09
Client ID: MW-BS02-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 10:28
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.79	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.86	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.23	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-09
Client ID: MW-BS02-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.5		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.70	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.70	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-09 Date Collected: 04/08/21 09:30

Client ID: MW-BS02-04082021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	95		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-10	Date Collected:	04/08/21 10:15
Client ID:	MW-SD46-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 10:58
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-10 Date Collected: 04/08/21 10:15
Client ID: MW-SD46-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	0.39	J	ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-10	Date Collected:	04/08/21 10:15
Client ID:	MW-SD46-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	98		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-11	Date Collected:	04/08/21 10:30
Client ID:	MW-T24-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 11:28
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-11
Client ID: MW-T24-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 10:30
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-11	Date Collected:	04/08/21 10:30
Client ID:	MW-T24-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	98		70-130

Project Name: NUCLEAR METALS

Lab Number: L2117869

Project Number: 3252H

Report Date: 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-12	Date Collected:	04/08/21 10:25
Client ID:	MW-BS7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Matrix:	Water
Analytical Method:	97,8260C
Analytical Date:	04/18/21 11:59
Analyst:	MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.34	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	1.8		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	1.1		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117869

Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-12 | Date Collected: 04/08/21 10:25

Client ID: MW-BS7-2-04082021 | Date Received: 04/08/21

Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	3.0		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.22	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.22	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-12
Client ID: MW-BS7-2-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 10:25
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	97		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-13
Client ID: MW-S21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 11:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 12:29
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-13 | Date Collected: 04/08/21 11:30
Client ID: MW-S21-04082021 | Date Received: 04/08/21
Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-13 Date Collected: 04/08/21 11:30
Client ID: MW-S21-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	100		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-14
Client ID: ML-1-2-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 09:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 13:00
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-14	Date Collected:	04/08/21 09:35
Client ID:	ML-1-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-14 Date Collected: 04/08/21 09:35
Client ID: ML-1-2-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	100		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-15
Client ID: GZW-7-2-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 12:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 13:30
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.47	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-15 Date Collected: 04/08/21 12:00
Client ID: GZW-7-2-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.1		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-15 Date Collected: 04/08/21 12:00
Client ID: GZW-7-2-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	101		70-130

SAMPLE RESULTS

Lab ID:	L2117869-16	Date Collected:	04/08/21 14:00
Client ID:	EQ BLANK1-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 14:01
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16 Date Collected: 04/08/21 14:00
Client ID: EQ BLANK1-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16 Date Collected: 04/08/21 14:00
Client ID: EQ BLANK1-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	100		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-17	Date Collected:	04/08/21 10:45
Client ID:	MW-BS34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 20:44
Analyst: MM

Parameter	**Result**	**Qualifier**	**Units**	**RL**	**MDL**	**Dilution Factor**
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-17
Date Collected: 04/08/21 10:45
Client ID: MW-BS34-04082021
Date Received: 04/08/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-17	Date Collected:	04/08/21 10:45
Client ID:	MW-BS34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	104		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-18	Date Collected:	04/08/21 13:25
Client ID:	MW-SD43-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 21:14
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-18 Date Collected: 04/08/21 13:25
Client ID: MW-SD43-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.6		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	1.2	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.64	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.64	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-18	Date Collected:	04/08/21 13:25
Client ID:	MW-SD43-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	100		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-19
Client ID: MW-S64-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/20/21 07:10
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	0.35	J	ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	1.2		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-19 Date Collected: 04/08/21 14:00
Client ID: MW-S64-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.81	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-19	Date Collected:	04/08/21 14:00
Client ID:	MW-S64-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	123		70-130
Dibromofluoromethane	99		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-20	Date Collected:	04/08/21 14:15
Client ID:	MW-BS21-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 21:44
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-20 Date Collected: 04/08/21 14:15
Client ID: MW-BS21-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-20 Date Collected: 04/08/21 14:15

Client ID: MW-BS21-04082021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	102		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-21
Client ID: MW-SD34-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:20
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 22:14
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	1.4		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.79	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	2.1		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-21 Date Collected: 04/08/21 14:20
Client ID: MW-SD34-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	5.2		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.5		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.5		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-21 Date Collected: 04/08/21 14:20

Client ID: MW-SD34-04082021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	101		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-24
Client ID: BEW-1-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 15:10
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 23:15
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.32	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.60	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.63	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-24
Client ID: BEW-1-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 15:10
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	2.6		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.47	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.47	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-24	Date Collected:	04/08/21 15:10
Client ID:	BEW-1-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	101		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-25	Date Collected:	04/08/21 15:38
Client ID:	ML-1-3-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/19/21 23:45
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	4.4		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	0.56	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.21	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-25
Client ID: ML-1-3-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 15:38
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.25	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.0		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.0		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-25	Date Collected:	04/08/21 15:38
Client ID:	ML-1-3-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	120		70-130
Dibromofluoromethane	104		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-26
Client ID: MW-S38-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 16:10
Date Received: 04/08/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/20/21 18:10
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-26 Date Collected: 04/08/21 16:10
Client ID: MW-S38-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-26 Date Collected: 04/08/21 16:10
Client ID: MW-S38-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	124		70-130
Dibromofluoromethane	98		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-27	Date Collected:	04/08/21 15:00
Client ID:	HA20-CMT-2S-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/20/21 18:40
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	0.44	J	ug/l	0.50	0.16	1
Toluene	3.7		ug/l	1.0	0.20	1
Ethylbenzene	0.52	J	ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Serial_No:05242120:42

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-27
Client ID: HA20-CMT-2S-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 15:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	1.9	J	ug/l	2.0	0.33	1
o-Xylene	1.2		ug/l	1.0	0.39	1
Xylenes, Total	3.1	J	ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	8.3		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-27	Date Collected:	04/08/21 15:00
Client ID:	HA20-CMT-2S-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	0.26	J	ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	1.3	J	ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	124		70-130
Dibromofluoromethane	99		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-16 Batch: WG1487775-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-16 Batch: WG1487775-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-16 Batch: WG1487775-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	95		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/19/21 16:10
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 17-18,20-21,24-25 Batch: WG1488231-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/19/21 16:10
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 17-18,20-21,24-25 Batch: WG1488231-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/19/21 16:10
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 17-18,20-21,24-25 Batch: WG1488231-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	120		70-130
Dibromofluoromethane	98		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/20/21 06:10
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 19 Batch: WG1488309-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/20/21 06:10
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 19 Batch: WG1488309-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/20/21 06:10
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 19 Batch: WG1488309-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	97		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/20/21 17:39
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 26-27 Batch: WG1488695-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/20/21 17:39
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 26-27 Batch: WG1488695-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/20/21 17:39
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 26-27 Batch: WG1488695-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	120		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-16 Batch: WG1487775-3 WG1487775-4								
Methylene chloride	84		82		70-130	2		20
1,1-Dichloroethane	84		84		70-130	0		20
Chloroform	83		83		70-130	0		20
Carbon tetrachloride	82		81		70-130	1		20
1,2-Dichloropropane	86		87		70-130	1		20
Dibromochloromethane	110		100		70-130	10		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	93		92		70-130	1		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	81		79		70-130	3		20
1,2-Dichloroethane	93		92		70-130	1		20
1,1,1-Trichloroethane	81		80		70-130	1		20
Bromodichloromethane	86		85		70-130	1		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	92		91		70-130	1		20
1,1-Dichloropropene	82		81		70-130	1		20
Bromoform	110		120		70-130	9		20
1,1,2,2-Tetrachloroethane	120		130		70-130	8		20
Benzene	83		82		70-130	1		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		100		70-130	10		20
Chloromethane	82		81		70-130	1		20
Bromomethane	**68**	Q	**69**	Q	70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-16 Batch: WG1487775-3 WG1487775-4								
Vinyl chloride	83		81		70-130	2		20
Chloroethane	84		81		70-130	4		20
1,1-Dichloroethene	72		76		70-130	5		20
trans-1,2-Dichloroethene	78		77		70-130	1		20
Trichloroethene	77		76		70-130	1		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	100		110		70-130	10		20
Methyl tert butyl ether	90		88		70-130	2		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	81		81		70-130	0		20
Dibromomethane	88		87		70-130	1		20
1,2,3-Trichloropropane	130		130		70-130	0		20
Styrene	100		95		70-130	5		20
Dichlorodifluoromethane	74		73		70-130	1		20
Acetone	96		93		70-130	3		20
Carbon disulfide	74		77		70-130	4		20
Methyl ethyl ketone	100		100		70-130	0		20
Methyl isobutyl ketone	100		110		70-130	10		20
2-Hexanone	110		110		70-130	0		20
Bromochloromethane	82		82		70-130	0		20
Tetrahydrofuran	97		98		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-16 Batch: WG1487775-3 WG1487775-4								
2,2-Dichloropropane	90		88		70-130	2		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	99		99		70-130	0		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	120		110		70-130	9		20
Hexachlorobutadiene	94		94		70-130	0		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	92		92		70-130	0		20
Naphthalene	120		120		70-130	0		20
n-Propylbenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	120		120		70-130	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,3,5-Trimethylbenzene	100		100		70-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
Diethyl ether	88		88		70-130	0		20
Diisopropyl Ether	93		93		70-130	0		20
Ethyl-Tert-Butyl-Ether	92		91		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-16 Batch: WG1487775-3 WG1487775-4								
Tertiary-Amyl Methyl Ether	90		90		70-130	0		20
1,4-Dioxane	88		88		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		104		70-130
Toluene-d8	112		110		70-130
4-Bromofluorobenzene	110		110		70-130
Dibromofluoromethane	93		93		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 17-18,20-21,24-25 Batch: WG1488231-3 WG1488231-4								
Methylene chloride	87		85		70-130	2		20
1,1-Dichloroethane	88		87		70-130	1		20
Chloroform	86		84		70-130	2		20
Carbon tetrachloride	82		80		70-130	2		20
1,2-Dichloropropane	89		88		70-130	1		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	92		88		70-130	4		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	78		76		70-130	3		20
1,2-Dichloroethane	94		93		70-130	1		20
1,1,1-Trichloroethane	82		80		70-130	2		20
Bromodichloromethane	88		86		70-130	2		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	93		92		70-130	1		20
1,1-Dichloropropene	83		81		70-130	2		20
Bromoform	110		110		70-130	0		20
1,1,2,2-Tetrachloroethane	120		120		70-130	0		20
Benzene	86		84		70-130	2		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		100		70-130	10		20
Chloromethane	83		83		70-130	0		20
Bromomethane	70		71		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 17-18,20-21,24-25 Batch: WG1488231-3 WG1488231-4								
Vinyl chloride	80		80		70-130	0		20
Chloroethane	85		82		70-130	4		20
1,1-Dichloroethene	70		73		70-130	4		20
trans-1,2-Dichloroethene	79		78		70-130	1		20
Trichloroethene	79		77		70-130	3		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	100		110		70-130	10		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	85		86		70-130	1		20
p/m-Xylene	95		90		70-130	5		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	82		80		70-130	2		20
Dibromomethane	89		87		70-130	2		20
1,2,3-Trichloropropane	120		130		70-130	8		20
Styrene	100		95		70-130	5		20
Dichlorodifluoromethane	**69**	Q	**69**	Q	70-130	0		20
Acetone	94		96		70-130	2		20
Carbon disulfide	75		76		70-130	1		20
Methyl ethyl ketone	99		100		70-130	1		20
Methyl isobutyl ketone	99		98		70-130	1		20
2-Hexanone	100		100		70-130	0		20
Bromochloromethane	82		78		70-130	5		20
Tetrahydrofuran	95		94		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 17-18,20-21,24-25 Batch: WG1488231-3 WG1488231-4								
2,2-Dichloropropane	92		89		70-130	3		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	100		100		70-130	0		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		99		70-130	1		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	100		110		70-130	10		20
Hexachlorobutadiene	90		91		70-130	1		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	91		90		70-130	1		20
Naphthalene	110		110		70-130	0		20
n-Propylbenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	100		100		70-130	0		20
1,2,4-Trimethylbenzene	110		100		70-130	10		20
Diethyl ether	79		85		70-130	7		20
Diisopropyl Ether	93		93		70-130	0		20
Ethyl-Tert-Butyl-Ether	89		90		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 17-18,20-21,24-25 Batch: WG1488231-3 WG1488231-4								
Tertiary-Amyl Methyl Ether	87		87		70-130	0		20
1,4-Dioxane	72		76		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	107		107		70-130
Toluene-d8	111		112		70-130
4-Bromofluorobenzene	108		110		70-130
Dibromofluoromethane	96		96		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 Batch: WG1488309-3 WG1488309-4								
Methylene chloride	97		96		70-130	1		20
1,1-Dichloroethane	100		98		70-130	2		20
Chloroform	97		94		70-130	3		20
Carbon tetrachloride	98		96		70-130	2		20
1,2-Dichloropropane	100		99		70-130	1		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	120		120		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	110		110		70-130	0		20
Trichlorofluoromethane	100		100		70-130	0		20
1,2-Dichloroethane	100		110		70-130	10		20
1,1,1-Trichloroethane	97		95		70-130	2		20
Bromodichloromethane	98		98		70-130	0		20
trans-1,3-Dichloropropene	120		120		70-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	100		97		70-130	3		20
Bromoform	120		120		70-130	0		20
1,1,2,2-Tetrachloroethane	130		**140**	Q	70-130	7		20
Benzene	98		95		70-130	3		20
Toluene	110		110		70-130	0		20
Ethylbenzene	120		120		70-130	0		20
Chloromethane	110		110		70-130	0		20
Bromomethane	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 Batch: WG1488309-3 WG1488309-4								
Vinyl chloride	110		110		70-130	0		20
Chloroethane	100		100		70-130	0		20
1,1-Dichloroethene	90		90		70-130	0		20
trans-1,2-Dichloroethene	92		90		70-130	2		20
Trichloroethene	90		89		70-130	1		20
1,2-Dichlorobenzene	120		120		70-130	0		20
1,3-Dichlorobenzene	120		110		70-130	9		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	98		100		70-130	2		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	105		100		70-130	5		20
cis-1,2-Dichloroethene	92		90		70-130	2		20
Dibromomethane	96		100		70-130	4		20
1,2,3-Trichloropropane	**140**	Q	**150**	Q	70-130	7		20
Styrene	105		105		70-130	0		20
Dichlorodifluoromethane	110		110		70-130	0		20
Acetone	110		110		70-130	0		20
Carbon disulfide	91		93		70-130	2		20
Methyl ethyl ketone	110		120		70-130	9		20
Methyl isobutyl ketone	110		110		70-130	0		20
2-Hexanone	110		120		70-130	9		20
Bromochloromethane	92		90		70-130	2		20
Tetrahydrofuran	100		110		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 Batch: WG1488309-3 WG1488309-4								
2,2-Dichloropropane	110		100		70-130	10		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	120		120		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	120		120		70-130	0		20
n-Butylbenzene	120		110		70-130	9		20
sec-Butylbenzene	120		110		70-130	9		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	120		120		70-130	0		20
p-Chlorotoluene	120		120		70-130	0		20
1,2-Dibromo-3-chloropropane	110		110		70-130	0		20
Hexachlorobutadiene	100		98		70-130	2		20
Isopropylbenzene	120		120		70-130	0		20
p-Isopropyltoluene	100		98		70-130	2		20
Naphthalene	110		120		70-130	9		20
n-Propylbenzene	120		120		70-130	0		20
1,2,3-Trichlorobenzene	120		120		70-130	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,3,5-Trimethylbenzene	120		110		70-130	9		20
1,2,4-Trimethylbenzene	120		120		70-130	0		20
Diethyl ether	100		100		70-130	0		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 Batch: WG1488309-3 WG1488309-4								
Tertiary-Amyl Methyl Ether	98		100		70-130	2		20
1,4-Dioxane	78		86		70-130	10		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	107		108		70-130
Toluene-d8	108		109		70-130
4-Bromofluorobenzene	110		110		70-130
Dibromofluoromethane	95		93		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 26-27 Batch: WG1488695-3 WG1488695-4								
Methylene chloride	96		91		70-130	5		20
1,1-Dichloroethane	97		100		70-130	3		20
Chloroform	95		96		70-130	1		20
Carbon tetrachloride	91		92		70-130	1		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	120		120		70-130	0		20
Tetrachloroethene	92		94		70-130	2		20
Chlorobenzene	100		110		70-130	10		20
Trichlorofluoromethane	91		95		70-130	4		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	91		93		70-130	2		20
Bromodichloromethane	98		100		70-130	2		20
trans-1,3-Dichloropropene	120		120		70-130	0		20
cis-1,3-Dichloropropene	100		110		70-130	10		20
1,1-Dichloropropene	92		95		70-130	3		20
Bromoform	120		120		70-130	0		20
1,1,2,2-Tetrachloroethane	130		**140**	Q	70-130	7		20
Benzene	94		96		70-130	2		20
Toluene	110		110		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	100		110		70-130	10		20
Bromomethane	89		95		70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 26-27 Batch: WG1488695-3 WG1488695-4								
Vinyl chloride	99		100		70-130	1		20
Chloroethane	96		100		70-130	4		20
1,1-Dichloroethene	82		79		70-130	4		20
trans-1,2-Dichloroethene	87		83		70-130	5		20
Trichloroethene	87		88		70-130	1		20
1,2-Dichlorobenzene	110		120		70-130	9		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	95		95		70-130	0		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	90		92		70-130	2		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	**140**	Q	**140**	Q	70-130	0		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	100		100		70-130	0		20
Acetone	120		120		70-130	0		20
Carbon disulfide	87		81		70-130	7		20
Methyl ethyl ketone	120		120		70-130	0		20
Methyl isobutyl ketone	100		110		70-130	10		20
2-Hexanone	120		120		70-130	0		20
Bromochloromethane	91		92		70-130	1		20
Tetrahydrofuran	97		98		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 26-27 Batch: WG1488695-3 WG1488695-4								
2,2-Dichloropropane	100		100		70-130	0		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	120		120		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	110		120		70-130	9		20
n-Butylbenzene	100		110		70-130	10		20
sec-Butylbenzene	100		110		70-130	10		20
tert-Butylbenzene	100		110		70-130	10		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	120		120		70-130	0		20
1,2-Dibromo-3-chloropropane	110		120		70-130	9		20
Hexachlorobutadiene	86		94		70-130	9		20
Isopropylbenzene	110		120		70-130	9		20
p-Isopropyltoluene	91		95		70-130	4		20
Naphthalene	110		120		70-130	9		20
n-Propylbenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	110		120		70-130	9		20
1,2,4-Trichlorobenzene	100		110		70-130	10		20
1,3,5-Trimethylbenzene	110		110		70-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
Diethyl ether	89		100		70-130	12		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 26-27 Batch: WG1488695-3 WG1488695-4								
Tertiary-Amyl Methyl Ether	100		100		70-130	0		20
1,4-Dioxane	92		92		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		110		70-130
Toluene-d8	107		107		70-130
4-Bromofluorobenzene	110		113		70-130
Dibromofluoromethane	94		96		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 QC Batch ID: WG1488309-6 WG1488309-7 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
Methylene chloride	ND	10	8.7	87		9.5	95		70-130	9		20
1,1-Dichloroethane	ND	10	10	100		10	100		70-130	0		20
Chloroform	ND	10	9.6	96		9.6	96		70-130	0		20
Carbon tetrachloride	ND	10	9.8	98		9.8	98		70-130	0		20
1,2-Dichloropropane	ND	10	9.6	96		9.9	99		70-130	3		20
Dibromochloromethane	ND	10	10	100		10	100		70-130	0		20
1,1,2-Trichloroethane	ND	10	11	110		11	110		70-130	0		20
Tetrachloroethene	ND	10	10	100		10	100		70-130	0		20
Chlorobenzene	ND	10	10	100		10	100		70-130	0		20
Trichlorofluoromethane	0.35J	10	10	100		11	110		70-130	10		20
1,2-Dichloroethane	ND	10	10	100		10	100		70-130	0		20
1,1,1-Trichloroethane	1.2	10	11	98		11	98		70-130	0		20
Bromodichloromethane	ND	10	9.5	95		9.6	96		70-130	1		20
trans-1,3-Dichloropropene	ND	10	11	110		11	110		70-130	0		20
cis-1,3-Dichloropropene	ND	10	9.3	93		9.5	95		70-130	2		20
1,1-Dichloropropene	ND	10	9.7	97		9.9	99		70-130	2		20
Bromoform	ND	10	11	110		11	110		70-130	0		20
1,1,2,2-Tetrachloroethane	ND	10	13	130		13	130		70-130	0		20
Benzene	ND	10	9.6	96		9.7	97		70-130	1		20
Toluene	ND	10	11	110		11	110		70-130	0		20
Ethylbenzene	ND	10	11	110		11	110		70-130	0		20
Chloromethane	ND	10	11	110		11	110		70-130	0		20
Bromomethane	ND	10	9.5	95		9.8	98		70-130	3		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 QC Batch ID: WG1488309-6 WG1488309-7 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
Vinyl chloride	ND	10	11	110		11	110		70-130	0		20
Chloroethane	ND	10	10	100		11	110		70-130	10		20
1,1-Dichloroethene	ND	10	8.9	89		9.1	91		70-130	2		20
trans-1,2-Dichloroethene	ND	10	8.3	83		9.3	93		70-130	11		20
Trichloroethene	0.81J	10	10	100		9.9	99		70-130	1		20
1,2-Dichlorobenzene	ND	10	11	110		11	110		70-130	0		20
1,3-Dichlorobenzene	ND	10	11	110		11	110		70-130	0		20
1,4-Dichlorobenzene	ND	10	10	100		11	110		70-130	10		20
Methyl tert butyl ether	ND	10	9.0	90		9.3	93		70-130	3		20
p/m-Xylene	ND	20	19	95		19	95		70-130	0		20
o-Xylene	ND	20	19	95		19	95		70-130	0		20
cis-1,2-Dichloroethene	ND	10	8.9	89		9.2	92		70-130	3		20
Dibromomethane	ND	10	9.4	94		9.4	94		70-130	0		20
1,2,3-Trichloropropane	ND	10	13	130		13	130		70-130	0		20
Styrene	ND	20	20	100		20	100		70-130	0		20
Dichlorodifluoromethane	ND	10	11	110		12	120		70-130	9		20
Acetone	ND	10	10	100		10	100		70-130	0		20
Carbon disulfide	ND	10	9.3	93		9.1	91		70-130	2		20
Methyl ethyl ketone	ND	10	11	110		11	110		70-130	0		20
Methyl isobutyl ketone	ND	10	9.8	98		9.7	97		70-130	1		20
2-Hexanone	ND	10	10	100		10	100		70-130	0		20
Bromochloromethane	ND	10	8.8	88		8.8	88		70-130	0		20
Tetrahydrofuran	ND	10	10	100		10	100		70-130	0		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 QC Batch ID: WG1488309-6 WG1488309-7 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
2,2-Dichloropropane	ND	10	9.9	99		10	100		70-130	1		20
1,2-Dibromoethane	ND	10	10	100		10	100		70-130	0		20
1,3-Dichloropropane	ND	10	11	110		11	110		70-130	0		20
1,1,1,2-Tetrachloroethane	ND	10	10	100		10	100		70-130	0		20
Bromobenzene	ND	10	11	110		11	110		70-130	0		20
n-Butylbenzene	ND	10	10	100		11	110		70-130	10		20
sec-Butylbenzene	ND	10	11	110		11	110		70-130	0		20
tert-Butylbenzene	ND	10	10	100		11	110		70-130	10		20
o-Chlorotoluene	ND	10	12	120		12	120		70-130	0		20
p-Chlorotoluene	ND	10	11	110		12	120		70-130	9		20
1,2-Dibromo-3-chloropropane	ND	10	10	100		10	100		70-130	0		20
Hexachlorobutadiene	ND	10	8.9	89		9.6	96		70-130	8		20
Isopropylbenzene	ND	10	12	120		12	120		70-130	0		20
p-Isopropyltoluene	ND	10	9.4	94		9.6	96		70-130	2		20
Naphthalene	ND	10	9.9	99		10	100		70-130	1		20
n-Propylbenzene	ND	10	12	120		12	120		70-130	0		20
1,2,3-Trichlorobenzene	ND	10	10	100		11	110		70-130	10		20
1,2,4-Trichlorobenzene	ND	10	9.5	95		9.9	99		70-130	4		20
1,3,5-Trimethylbenzene	ND	10	11	110		11	110		70-130	0		20
1,2,4-Trimethylbenzene	ND	10	11	110		11	110		70-130	0		20
Diethyl ether	ND	10	9.1	91		9.1	91		70-130	0		20
Diisopropyl Ether	ND	10	10	100		10	100		70-130	0		20
Ethyl-Tert-Butyl-Ether	ND	10	9.6	96		9.8	98		70-130	2		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 QC Batch ID: WG1488309-6 WG1488309-7 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
Tertiary-Amyl Methyl Ether	ND	10	9.2	92		9.2	92		70-130	0		20
1,4-Dioxane	ND	500	380	76		410	82		70-130	8		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		107		70-130
4-Bromofluorobenzene	112		113		70-130
Dibromofluoromethane	98		97		70-130
Toluene-d8	109		108		70-130

SEMIVOLATILES

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-01
Client ID: MW-S02-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 04:12
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 10:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-01
Client ID: MW-S02-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 15:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	51		30-130
2-Fluorobiphenyl	54		30-130
2,4,6-Tribromophenol	69		15-110
4-Terphenyl-d14	50		30-130

Project Name: NUCLEAR METALS

Lab Number: L2117869

Project Number: 3252H

Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-01
Client ID: MW-S02-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 01:39
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 10:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-01	Date Collected:	04/07/21 15:40
Client ID:	MW-S02-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	73		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	95		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-01	Date Collected:	04/07/21 15:40
Client ID:	MW-S02-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 20:00
Analytical Date:	04/16/21 02:28		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.14		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	58		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-02	Date Collected:	04/07/21 15:45
Client ID:	MW-S02-04072021 DUP	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 10:10
Analytical Date:	04/15/21 04:38		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-02	Date Collected:	04/07/21 15:45
Client ID:	MW-S02-04072021 DUP	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	69		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	64		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-02
Client ID: MW-S02-04072021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:45
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 01:58
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 10:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-02	Date Collected:	04/07/21 15:45
Client ID:	MW-S02-04072021 DUP	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	94		30-130
2-Fluorobiphenyl	102		30-130
2,4,6-Tribromophenol	110		15-110
4-Terphenyl-d14	124		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-02
Client ID: MW-S02-04072021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:45
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 02:59
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.55		ug/l	0.156	0.0781	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-03
Client ID: MW-BS46-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 16:15
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 05:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 10:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-03 Date Collected: 04/07/21 16:15
Client ID: MW-BS46-04072021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	55		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-03
Client ID: MW-BS46-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 16:15
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 02:17
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 10:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.09	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	4.0		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.09	J	ug/l	0.10	0.01	1
Phenanthrene	0.10		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	1.4		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-03
Client ID: MW-BS46-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 16:15
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	68		15-110
Phenol-d6	71		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	97		30-130
2,4,6-Tribromophenol	88		15-110
4-Terphenyl-d14	119		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-03	Date Collected:	04/07/21 16:15
Client ID:	MW-BS46-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 20:00
Analytical Date:	04/16/21 03:31		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-04
Client ID: MW-S08-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:40
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 18:20
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 10:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-04 Date Collected: 04/07/21 17:40
Client ID: MW-S08-04072021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	77		15-110
4-Terphenyl-d14	80		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-04	Date Collected:	04/07/21 17:40
Client ID:	MW-S08-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 10:13
Analytical Date:	04/16/21 02:35		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.37		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.06	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.07	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.12		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.05	J	ug/l	0.10	0.01	1
Chrysene	0.05	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.11		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.03	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.12		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.14		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-04	Date Collected:	04/07/21 17:40
Client ID:	MW-S08-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	92		30-130
2,4,6-Tribromophenol	80		15-110
4-Terphenyl-d14	119		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-04
Client ID: MW-S08-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:40
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 04:03
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	55		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-05	Date Collected:	04/07/21 17:35
Client ID:	MW-BS51-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 10:10
Analytical Date:	04/15/21 17:57		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.8	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-05	Date Collected:	04/07/21 17:35
Client ID:	MW-BS51-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**3**	Q	15-110
Phenol-d6	**2**	Q	15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	16		15-110
4-Terphenyl-d14	62		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-05
Client ID: MW-BS51-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 17:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 02:54
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/14/21 10:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.02	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-05 Date Collected: 04/07/21 17:35

Client ID: MW-BS51-04072021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**3**	Q	15-110
Phenol-d6	**2**	Q	15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	21		15-110
4-Terphenyl-d14	102		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-05	Date Collected:	04/07/21 17:35
Client ID:	MW-BS51-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/13/21 20:00
Analytical Date:	04/16/21 04:36		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	17.3		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-05 RE
Client ID: MW-BS51-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/22/21 11:39
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 21:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-05 RE
Client ID: MW-BS51-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**1**	Q	15-110
Phenol-d6	**0**	Q	15-110
Nitrobenzene-d5	47		30-130
2-Fluorobiphenyl	48		30-130
2,4,6-Tribromophenol	**6**	Q	15-110
4-Terphenyl-d14	49		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-05 RE
Client ID: MW-BS51-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 12:14
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 21:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-05 RE	Date Collected:	04/07/21 17:35
Client ID:	MW-BS51-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**1**	Q	15-110
Phenol-d6	**0**	Q	15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	52		30-130
2,4,6-Tribromophenol	**6**	Q	15-110
4-Terphenyl-d14	66		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-06
Client ID: MW-S16-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 03:47
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-06 Date Collected: 04/07/21 17:40

Client ID: MW-S16-04072021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	34		15-110
Nitrobenzene-d5	49		30-130
2-Fluorobiphenyl	51		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	72		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117869

Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-06
Client ID: MW-S16-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 03:09
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-06	Date Collected:	04/07/21 17:40
Client ID:	MW-S16-04072021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	31		15-110
Nitrobenzene-d5	42		30-130
2-Fluorobiphenyl	54		30-130
2,4,6-Tribromophenol	82		15-110
4-Terphenyl-d14	79		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-06
Client ID: MW-S16-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 05:08
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.222		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-07
Client ID: MW-S19-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:10
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/17/21 21:16
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-07	Date Collected:	04/08/21 09:10
Client ID:	MW-S19-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	41		15-110
Nitrobenzene-d5	55		30-130
2-Fluorobiphenyl	49		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-07
Client ID: MW-S19-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:10
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 05:42
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-07
Client ID: MW-S19-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:10
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 22:18
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-07	Date Collected:	04/08/21 09:10
Client ID:	MW-S19-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	49		30-130
2-Fluorobiphenyl	57		30-130
2,4,6-Tribromophenol	54		15-110
4-Terphenyl-d14	95		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-09
Client ID: MW-BS02-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 03:21
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-09	Date Collected:	04/08/21 09:30
Client ID:	MW-BS02-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		15-110
Phenol-d6	65		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	85		15-110
4-Terphenyl-d14	69		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117869

Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-09
Client ID: MW-BS02-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 03:28
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-09 Date Collected: 04/08/21 09:30

Client ID: MW-BS02-04082021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	106		15-110
4-Terphenyl-d14	76		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-09	Date Collected:	04/08/21 09:30
Client ID:	MW-BS02-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 01:00		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	6.98		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	57		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-10	Date Collected:	04/08/21 10:15
Client ID:	MW-SD46-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 17:18
Analytical Date:	04/15/21 20:14		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-10	Date Collected:	04/08/21 10:15
Client ID:	MW-SD46-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		15-110
Phenol-d6	61		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	109		15-110
4-Terphenyl-d14	84		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-10
Client ID: MW-SD46-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 10:15
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 03:48
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-10	Date Collected:	04/08/21 10:15
Client ID:	MW-SD46-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	66		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	**139**	Q	15-110
4-Terphenyl-d14	94		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-10	Date Collected:	04/08/21 10:15
Client ID:	MW-SD46-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 01:33		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.490		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-11
Client ID: MW-T24-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 10:30
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 20:36
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	3.8		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-11	Date Collected:	04/08/21 10:30
Client ID:	MW-T24-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	86		15-110
Phenol-d6	72		15-110
Nitrobenzene-d5	94		30-130
2-Fluorobiphenyl	83		30-130
2,4,6-Tribromophenol	**115**	Q	15-110
4-Terphenyl-d14	86		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-11
Client ID: MW-T24-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 10:30
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 04:07
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.33		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.42		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.13		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.27		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.48		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.16		ug/l	0.10	0.01	1
Chrysene	0.31		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.33		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.08	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.06	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.32		ug/l	0.10	0.01	1
Pyrene	0.27		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.34		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-11	Date Collected:	04/08/21 10:30
Client ID:	MW-T24-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	90		30-130
2,4,6-Tribromophenol	**142**	Q	15-110
4-Terphenyl-d14	88		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-11	Date Collected:	04/08/21 10:30
Client ID:	MW-T24-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 02:06		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.327		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-12	Date Collected:	04/08/21 10:25
Client ID:	MW-BS7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/12/21 16:35
Analytical Date:	04/17/21 22:04		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.79	0.520	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.9	6.60	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.9	5.95	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.8	19.9	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.8	20.2	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	24		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**5**	Q	10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	10		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	11		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	22		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2117869

Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-12
Client ID: MW-BS7-2-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 10:25
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/17/21 21:39
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-12
Client ID: MW-BS7-2-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 10:25
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	20		15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	58		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	79		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-12	Date Collected:	04/08/21 10:25
Client ID:	MW-BS7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 03:14		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	21.0		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117869

Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-12
Client ID: MW-BS7-2-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 10:25
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 13:59
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.01	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.23		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.10	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-12	Date Collected:	04/08/21 10:25
Client ID:	MW-BS7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	28		15-110
Phenol-d6	**14**	Q	15-110
Nitrobenzene-d5	43		30-130
2-Fluorobiphenyl	51		30-130
2,4,6-Tribromophenol	64		15-110
4-Terphenyl-d14	62		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-12 R
Client ID: MW-BS7-2-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 10:25
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/16/21 15:42
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.416	J	ng/l	1.79	0.366	1
Perfluoropentanoic Acid (PFPeA)	0.552	J	ng/l	1.79	0.355	1
Perfluorobutanesulfonic Acid (PFBS)	0.395	J	ng/l	1.79	0.213	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.79	0.405	1
Perfluorohexanoic Acid (PFHxA)	0.922	JF	ng/l	1.79	0.294	1
Perfluoropentanesulfonic Acid (PFPeS)	0.251	J	ng/l	1.79	0.220	1
Perfluoroheptanoic Acid (PFHpA)	0.420	J	ng/l	1.79	0.202	1
Perfluorohexanesulfonic Acid (PFHxS)	1.78	JF	ng/l	1.79	0.337	1
Perfluorooctanoic Acid (PFOA)	2.06		ng/l	1.79	0.212	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	18.0		ng/l	1.79	1.19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.79	0.617	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.79	0.280	1
Perfluorooctanesulfonic Acid (PFOS)	1.26	J	ng/l	1.79	0.452	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.79	0.273	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.79	1.09	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.79	1.00	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.581	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.233	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.79	0.879	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.79	0.721	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.334	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.293	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.222	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.8	20.4	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.79	0.301	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.59	1.11	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.59	1.03	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-12 R	Date Collected:	04/08/21 10:25
Client ID:	MW-BS7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.79	0.552	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.48	1.81	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.79	0.248	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.79	0.263	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	71		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	91		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	76		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	91		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	59		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	66		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	91		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	75		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	112		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	79		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	145		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	58		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	82		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	57		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	82		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	67		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	68		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	74		10-206

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-13
Client ID: MW-S21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 11:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/15/21 20:16
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.87	0.382	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.87	0.370	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.87	0.223	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.87	0.423	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.87	0.307	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.87	0.229	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.87	0.211	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.87	0.352	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.87	0.221	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.87	1.25	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.87	0.644	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.87	0.292	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.87	0.471	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.87	0.284	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.87	1.13	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.87	1.05	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.87	0.606	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.87	0.243	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.87	0.917	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.87	0.752	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.87	0.348	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.87	0.306	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.87	0.232	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	46.8	21.2	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.87	0.314	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.74	1.16	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.74	1.07	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-13	Date Collected:	04/08/21 11:30
Client ID:	MW-S21-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.87	0.576	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.68	1.89	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.87	0.259	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.87	0.274	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	82		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	80		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	72		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	70		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	79		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	112		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	95		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	87		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	97		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	87		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	107		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	60		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	96		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	55		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	91		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	87		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	95		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	129		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-13
Client ID: MW-S21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 11:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/17/21 22:18
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.87	0.542	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.7	6.88	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.7	6.21	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	46.8	20.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	46.8	21.1	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	31		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**1**	Q	10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**1**	Q	10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	**5**	Q	10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	**5**	Q	10-187

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-13
Client ID: MW-S21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 11:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/17/21 19:44
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-13
Client ID: MW-S21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 11:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	49		30-130
2-Fluorobiphenyl	46		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	70		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-13	Date Collected:	04/08/21 11:30
Client ID:	MW-S21-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 02:38		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.163	0.0815	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	55		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-13	Date Collected:	04/08/21 11:30
Client ID:	MW-S21-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 11:50
Analytical Date:	04/17/21 22:56		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-13	Date Collected:	04/08/21 11:30
Client ID:	MW-S21-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	32		15-110
Phenol-d6	35		15-110
Nitrobenzene-d5	44		30-130
2-Fluorobiphenyl	52		30-130
2,4,6-Tribromophenol	49		15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-14
Client ID: ML-1-2-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 20:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-14	Date Collected:	04/08/21 09:35
Client ID:	ML-1-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	88		15-110
Phenol-d6	70		15-110
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	**111**	Q	15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-14
Client ID: ML-1-2-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 04:27
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.18		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.12		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-14	Date Collected:	04/08/21 09:35
Client ID:	ML-1-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		15-110
Phenol-d6	64		15-110
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	95		30-130
2,4,6-Tribromophenol	**165**	Q	15-110
4-Terphenyl-d14	96		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-14	Date Collected:	04/08/21 09:35
Client ID:	ML-1-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 03:45		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.914		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-15	Date Collected:	04/08/21 12:00
Client ID:	GZW-7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/12/21 16:35
Analytical Date:	04/16/21 04:16		
Analyst:	RS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	1.85		ng/l	1.78	0.363	1
Perfluoropentanoic Acid (PFPeA)	0.722	J	ng/l	1.78	0.352	1
Perfluorobutanesulfonic Acid (PFBS)	0.526	J	ng/l	1.78	0.212	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.78	0.402	1
Perfluorohexanoic Acid (PFHxA)	0.832	JF	ng/l	1.78	0.292	1
Perfluoropentanesulfonic Acid (PFPeS)	0.302	JF	ng/l	1.78	0.218	1
Perfluoroheptanoic Acid (PFHpA)	0.590	J	ng/l	1.78	0.200	1
Perfluorohexanesulfonic Acid (PFHxS)	0.896	J	ng/l	1.78	0.334	1
Perfluorooctanoic Acid (PFOA)	61.9		ng/l	1.78	0.210	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.78	1.18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.78	0.612	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.78	0.277	1
Perfluorooctanesulfonic Acid (PFOS)	1.30	J	ng/l	1.78	0.448	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.78	0.270	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.78	1.08	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.78	0.996	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.78	0.576	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.78	0.231	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.78	0.871	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.78	0.715	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.78	0.331	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.78	0.291	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.78	0.220	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.4	20.2	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.78	0.299	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.56	1.10	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.56	1.02	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-15 Date Collected: 04/08/21 12:00
Client ID: GZW-7-2-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.78	0.548	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.44	1.80	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.78	0.246	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.78	0.261	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	70		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	87		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	87		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	83		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	60		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	66		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	89		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	72		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	87		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	75		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	88		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	74		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	108		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	36		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	39		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	82		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	70		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	80		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	113		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-15
Client ID: GZW-7-2-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 12:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/17/21 20:53
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	2.2	J	ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-15	Date Collected:	04/08/21 12:00
Client ID:	GZW-7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	85		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	81		15-110
4-Terphenyl-d14	93		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-15	Date Collected:	04/08/21 12:00
Client ID:	GZW-7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 04:16		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	35.6		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS

Lab Number: L2117869

Project Number: 3252H

Report Date: 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-15	Date Collected:	04/08/21 12:00
Client ID:	GZW-7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 11:50
Analytical Date:	04/17/21 23:15		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.82		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.42		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-15	Date Collected:	04/08/21 12:00
Client ID:	GZW-7-2-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		15-110
Phenol-d6	35		15-110
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	81		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	100		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-15 RE
Client ID: GZW-7-2-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 12:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/21 03:11
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.80	0.523	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.0	6.64	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.0	5.99	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	45.1	20.0	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	45.1	20.3	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	63		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	51		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	50		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	54		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	55		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16
Client ID: EQ BLANK1-04082021
Sample Location: CONCORD, MA

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/16/21 04:33
Analyst: RS

Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.87	0.381	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.87	0.370	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.87	0.222	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.87	0.422	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.87	0.306	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.87	0.229	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.87	0.210	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.87	0.351	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.87	0.220	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.87	1.24	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.87	0.643	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.87	0.291	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.87	0.471	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.87	0.284	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.87	1.13	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.87	1.05	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.87	0.605	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.87	0.243	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.87	0.915	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.87	0.751	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.87	0.347	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.87	0.306	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.87	0.232	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	46.7	21.2	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.87	0.314	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.74	1.16	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.74	1.07	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-16	Date Collected:	04/08/21 14:00
Client ID:	EQ BLANK1-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.87	0.575	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.67	1.89	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.87	0.258	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.87	0.274	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	95		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	127		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	103		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	98		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	92		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	93		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	102		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	96		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	95		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	93		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	95		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	124		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	81		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	104		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	76		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	99		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	83		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	113		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	136		10-206

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16
Client ID: EQ BLANK1-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 19:51
Analyst: JG
Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16 | Date Collected: 04/08/21 14:00
Client ID: EQ BLANK1-04082021 | Date Received: 04/08/21
Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		15-110
Phenol-d6	60		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	96		15-110
4-Terphenyl-d14	71		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16
Client ID: EQ BLANK1-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 04:47
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16
Client ID: EQ BLANK1-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	61		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	**130**	Q	15-110
4-Terphenyl-d14	76		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16
Client ID: EQ BLANK1-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 04:48
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 18:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16 RE
Client ID: EQ BLANK1-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/21 03:19
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.79	0.520	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.9	6.59	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.9	5.95	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.8	19.9	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.8	20.2	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	64		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	52		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	50		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	59		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	58		10-187

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-17
Client ID: MW-BS34-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 10:45
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/16/21 04:49
Analyst: RS
Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.382	J	ng/l	1.75	0.357	1
Perfluoropentanoic Acid (PFPeA)	0.361	J	ng/l	1.75	0.347	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.75	0.208	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.75	0.396	1
Perfluorohexanoic Acid (PFHxA)	0.329	JF	ng/l	1.75	0.287	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.75	0.215	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.75	0.197	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.75	0.329	1
Perfluorooctanoic Acid (PFOA)	0.340	J	ng/l	1.75	0.207	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.75	1.17	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.75	0.603	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.75	0.273	1
Perfluorooctanesulfonic Acid (PFOS)	0.522	J	ng/l	1.75	0.442	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.75	0.266	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.75	1.06	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.75	0.981	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.75	0.568	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.75	0.228	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.75	0.858	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.75	0.704	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.75	0.326	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.75	0.287	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.75	0.217	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	43.8	19.9	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.75	0.294	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.50	1.09	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.50	1.00	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-17
Client ID: MW-BS34-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 10:45
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.75	0.540	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.38	1.77	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.75	0.242	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.75	0.257	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	89		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	125		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	98		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	101		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	87		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	89		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	92		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	108		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	89		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	88		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	83		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	101		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	58		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	86		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	52		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	86		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	78		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	112		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	122		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-17	Date Collected:	04/08/21 10:45
Client ID:	MW-BS34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 17:18
Analytical Date:	04/15/21 20:15		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-17	Date Collected:	04/08/21 10:45
Client ID:	MW-BS34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		15-110
Phenol-d6	29		15-110
Nitrobenzene-d5	38		30-130
2-Fluorobiphenyl	36		30-130
2,4,6-Tribromophenol	46		15-110
4-Terphenyl-d14	37		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-17	Date Collected:	04/08/21 10:45
Client ID:	MW-BS34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 17:23
Analytical Date:	04/16/21 05:06		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.18		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.06	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-17	Date Collected:	04/08/21 10:45
Client ID:	MW-BS34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	84		30-130
2,4,6-Tribromophenol	**155**	Q	15-110
4-Terphenyl-d14	92		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-17	Date Collected:	04/08/21 10:45
Client ID:	MW-BS34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/20/21 02:52		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.143	J	ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	54		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-17 RE	Date Collected:	04/08/21 10:45
Client ID:	MW-BS34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/20/21 16:36
Analytical Date:	04/21/21 03:26		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.73	0.502	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.3	6.38	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.3	5.75	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	43.3	19.2	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	43.3	19.5	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	62		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	54		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	50		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	53		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	50		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-18	Date Collected:	04/08/21 13:25
Client ID:	MW-SD43-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 17:18
Analytical Date:	04/16/21 17:52		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117869

Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-18
Client ID: MW-SD43-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 13:25
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	51		30-130
2,4,6-Tribromophenol	**7**	Q	15-110
4-Terphenyl-d14	51		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-18	Date Collected:	04/08/21 13:25
Client ID:	MW-SD43-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 17:23
Analytical Date:	04/16/21 05:26		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-18 Date Collected: 04/08/21 13:25
Client ID: MW-SD43-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		15-110
Phenol-d6	37		15-110
Nitrobenzene-d5	54		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	**9**	Q	15-110
4-Terphenyl-d14	66		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-18	Date Collected:	04/08/21 13:25
Client ID:	MW-SD43-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 07:07		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0912	J	ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-18 RE
Client ID: MW-SD43-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 13:25
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/22/21 12:02
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 21:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-18 RE	Date Collected:	04/08/21 13:25
Client ID:	MW-SD43-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	57		30-130
2-Fluorobiphenyl	56		30-130
2,4,6-Tribromophenol	68		15-110
4-Terphenyl-d14	55		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-18 RE
Client ID: MW-SD43-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 13:25
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 12:35
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 21:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-18 RE	Date Collected:	04/08/21 13:25
Client ID:	MW-SD43-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	76		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-19
Client ID: MW-S64-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/16/21 19:00
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-19 Date Collected: 04/08/21 14:00
Client ID: MW-S64-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	43		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	53		30-130
2,4,6-Tribromophenol	79		15-110
4-Terphenyl-d14	58		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-19
Client ID: MW-S64-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 05:45
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-19	Date Collected:	04/08/21 14:00
Client ID:	MW-S64-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		15-110
Phenol-d6	45		15-110
Nitrobenzene-d5	59		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	**113**	Q	15-110
4-Terphenyl-d14	82		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-19
Client ID:	MW-S64-04082021
Sample Location:	CONCORD, MA
Sample Depth:	
Matrix:	Water
Analytical Method:	97,8270D-SIM
Analytical Date:	04/17/21 07:39
Analyst:	SMB
Date Collected:	04/08/21 14:00
Date Received:	04/08/21
Field Prep:	Refer to COC
Extraction Method:	EPA 3510C
Extraction Date:	04/14/21 18:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	2.02		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-20
Client ID: MW-BS21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:15
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/16/21 05:06
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.938	J	ng/l	1.75	0.357	1
Perfluoropentanoic Acid (PFPeA)	3.25		ng/l	1.75	0.346	1
Perfluorobutanesulfonic Acid (PFBS)	0.658	J	ng/l	1.75	0.208	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.75	0.395	1
Perfluorohexanoic Acid (PFHxA)	2.21		ng/l	1.75	0.287	1
Perfluoropentanesulfonic Acid (PFPeS)	0.294	J	ng/l	1.75	0.214	1
Perfluoroheptanoic Acid (PFHpA)	0.721	J	ng/l	1.75	0.197	1
Perfluorohexanesulfonic Acid (PFHxS)	2.41		ng/l	1.75	0.329	1
Perfluorooctanoic Acid (PFOA)	1.54	J	ng/l	1.75	0.206	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	7.68		ng/l	1.75	1.16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.75	0.602	1
Perfluorononanoic Acid (PFNA)	0.497	J	ng/l	1.75	0.273	1
Perfluorooctanesulfonic Acid (PFOS)	0.738	J	ng/l	1.75	0.441	1
Perfluorodecanoic Acid (PFDA)	0.280	J	ng/l	1.75	0.266	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.75	1.06	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.75	0.980	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.75	0.567	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.75	0.227	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.75	0.857	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.75	0.703	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.75	0.325	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.75	0.286	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.75	0.217	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	43.7	19.9	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.75	0.294	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.50	1.08	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.50	1.00	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-20	Date Collected:	04/08/21 14:15
Client ID:	MW-BS21-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.75	0.539	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.37	1.77	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.75	0.242	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.75	0.256	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	83		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	100		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	88		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	53		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	62		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	66		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	87		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	99		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	92		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	87		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	107		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	57		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	97		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	63		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	98		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	86		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	84		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	128		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-20	Date Collected:	04/08/21 14:15
Client ID:	MW-BS21-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/14/21 17:18
Analytical Date:	04/15/21 21:32		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-20
Client ID: MW-BS21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:15
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	35		30-130
2-Fluorobiphenyl	51		30-130
2,4,6-Tribromophenol	86		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-20
Client ID: MW-BS21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:15
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 06:24
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-20 Date Collected: 04/08/21 14:15

Client ID: MW-BS21-04082021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	29		15-110
Phenol-d6	35		15-110
Nitrobenzene-d5	31		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	**122**	Q	15-110
4-Terphenyl-d14	91		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-20	Date Collected:	04/08/21 14:15
Client ID:	MW-BS21-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 09:17		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0961	J	ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	54		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-20 RE
Client ID: MW-BS21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:15
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/21 03:33
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.79	0.518	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.9	6.58	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.9	5.94	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.7	19.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.7	20.1	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	62		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	54		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	51		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	52		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	48		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-21	Date Collected:	04/08/21 14:20
Client ID:	MW-SD34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/12/21 16:35
Analytical Date:	04/16/21 05:22		
Analyst:	RS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.595	J	ng/l	1.78	0.364	1
Perfluoropentanoic Acid (PFPeA)	0.695	J	ng/l	1.78	0.353	1
Perfluorobutanesulfonic Acid (PFBS)	0.524	JF	ng/l	1.78	0.212	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.78	0.403	1
Perfluorohexanoic Acid (PFHxA)	0.731	JF	ng/l	1.78	0.292	1
Perfluoropentanesulfonic Acid (PFPeS)	0.299	J	ng/l	1.78	0.218	1
Perfluoroheptanoic Acid (PFHpA)	0.570	J	ng/l	1.78	0.201	1
Perfluorohexanesulfonic Acid (PFHxS)	1.05	J	ng/l	1.78	0.335	1
Perfluorooctanoic Acid (PFOA)	4.71		ng/l	1.78	0.210	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.78	1.19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.78	0.613	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.78	0.278	1
Perfluorooctanesulfonic Acid (PFOS)	6.92		ng/l	1.78	0.449	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.78	0.271	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.78	1.08	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.78	0.998	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.78	0.577	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.78	0.232	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.78	0.873	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.78	0.716	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.78	0.332	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.78	0.292	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.78	0.221	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.6	20.2	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.78	0.299	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.56	1.10	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.56	1.02	1

Project Name: NUCLEAR METALS | **Lab Number:** L2117869

Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-21	Date Collected:	04/08/21 14:20
Client ID:	MW-SD34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.78	0.549	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.46	1.80	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.78	0.247	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.78	0.261	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	84		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	101		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	84		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	74		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	82		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	95		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	74		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	83		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	82		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	78		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	80		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	56		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	81		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	50		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	71		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	67		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	107		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	98		10-206

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-21
Client ID: MW-SD34-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:20
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 21:58
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-21	Date Collected:	04/08/21 14:20
Client ID:	MW-SD34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	26		15-110
Phenol-d6	32		15-110
Nitrobenzene-d5	**29**	Q	30-130
2-Fluorobiphenyl	47		30-130
2,4,6-Tribromophenol	80		15-110
4-Terphenyl-d14	72		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-21
Client ID: MW-SD34-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:20
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 06:44
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-21	Date Collected:	04/08/21 14:20
Client ID:	MW-SD34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	19		15-110
Phenol-d6	28		15-110
Nitrobenzene-d5	**25**	Q	30-130
2-Fluorobiphenyl	48		30-130
2,4,6-Tribromophenol	101		15-110
4-Terphenyl-d14	96		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-21	Date Collected:	04/08/21 14:20
Client ID:	MW-SD34-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 09:51		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	39.9		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-21 RE
Client ID: MW-SD34-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:20
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/21 03:40
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.79	0.519	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.9	6.59	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.9	5.95	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.8	19.9	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.8	20.2	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	64		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	51		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	49		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	52		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	51		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-22
Client ID: MW-SD34-04082021DUP
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:25
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/16/21 05:39
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.584	J	ng/l	1.81	0.370	1
Perfluoropentanoic Acid (PFPeA)	0.664	J	ng/l	1.81	0.359	1
Perfluorobutanesulfonic Acid (PFBS)	0.548	J	ng/l	1.81	0.216	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.81	0.410	1
Perfluorohexanoic Acid (PFHxA)	0.791	J	ng/l	1.81	0.297	1
Perfluoropentanesulfonic Acid (PFPeS)	0.301	J	ng/l	1.81	0.222	1
Perfluoroheptanoic Acid (PFHpA)	0.631	J	ng/l	1.81	0.204	1
Perfluorohexanesulfonic Acid (PFHxS)	1.15	JF	ng/l	1.81	0.341	1
Perfluorooctanoic Acid (PFOA)	4.72		ng/l	1.81	0.214	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.81	1.21	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.81	0.624	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.81	0.283	1
Perfluorooctanesulfonic Acid (PFOS)	6.57		ng/l	1.81	0.457	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.81	0.276	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.81	1.10	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.81	1.02	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.81	0.588	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.81	0.236	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.81	0.888	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.81	0.729	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.81	0.337	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.81	0.297	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.81	0.225	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	45.3	20.6	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.81	0.305	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.63	1.12	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.63	1.04	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-22	Date Collected:	04/08/21 14:25
Client ID:	MW-SD34-04082021DUP	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.81	0.558	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.53	1.83	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.81	0.251	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.81	0.266	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	86		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	106		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	84		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	78		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	80		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	90		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	87		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	84		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	88		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	94		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	61		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	84		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	64		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	82		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	73		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	92		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	108		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-22
Client ID: MW-SD34-04082021DUP
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:25
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 22:24
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-22	Date Collected:	04/08/21 14:25
Client ID:	MW-SD34-04082021DUP	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	88		15-110
4-Terphenyl-d14	79		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-22
Client ID: MW-SD34-04082021DUP
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:25
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 07:04
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-22 Date Collected: 04/08/21 14:25

Client ID: MW-SD34-04082021DUP Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	53		30-130
2-Fluorobiphenyl	71		30-130
2,4,6-Tribromophenol	**129**	Q	15-110
4-Terphenyl-d14	91		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-22
Client ID: MW-SD34-04082021DUP
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:25
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 10:27
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 18:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	39.6		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-22 RE	Date Collected:	04/08/21 14:25
Client ID:	MW-SD34-04082021DUP	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/20/21 16:36
Analytical Date:	04/21/21 03:47		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.79	0.519	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.9	6.58	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.9	5.94	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.7	19.9	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.7	20.2	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	66		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	50		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	48		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	50		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	47		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-23	Date Collected:	04/08/21 14:20
Client ID:	FIELD BLANK1-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/12/21 16:35
Analytical Date:	04/16/21 05:55		
Analyst:	RS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.03	0.413	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.03	0.401	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.03	0.241	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.03	0.458	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.03	0.332	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.03	0.248	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.03	0.228	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.03	0.381	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.03	0.239	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.03	1.35	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.03	0.697	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.03	0.316	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.03	0.511	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.03	0.308	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.03	1.23	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.03	1.13	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.03	0.656	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.03	0.263	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.03	0.993	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.03	0.814	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.03	0.377	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.03	0.332	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.03	0.251	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.6	23.0	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.03	0.340	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.05	1.26	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.05	1.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-23	Date Collected:	04/08/21 14:20
Client ID:	FIELD BLANK1-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.03	0.624	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.06	2.05	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.03	0.280	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.03	0.297	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	124		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	96		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	94		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	93		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	93		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	96		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	98		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	94		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	94		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	94		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	114		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	51		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	101		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	75		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	92		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	83		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	108		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	128		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-23
Client ID: FIELD BLANK1-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:20
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/17/21 23:16
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.03	0.588	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.3	7.46	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.3	6.73	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.6	22.5	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.6	22.8	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	53		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**1**	Q	10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**1**	Q	10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	10		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	10		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-24
Client ID: BEW-1-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 15:10
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 22:49
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-24 Date Collected: 04/08/21 15:10
Client ID: BEW-1-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	59		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	82		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-24	Date Collected:	04/08/21 15:10
Client ID:	BEW-1-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 17:23
Analytical Date:	04/16/21 07:23		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-24 Date Collected: 04/08/21 15:10

Client ID: BEW-1-04082021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	41		15-110
Nitrobenzene-d5	50		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	80		15-110
4-Terphenyl-d14	96		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-24	Date Collected:	04/08/21 15:10
Client ID:	BEW-1-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 11:02		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	14.3		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-25
Client ID: ML-1-3-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 15:38
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 23:15
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-25	Date Collected:	04/08/21 15:38
Client ID:	ML-1-3-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	89		15-110
Phenol-d6	74		15-110
Nitrobenzene-d5	73		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	104		15-110
4-Terphenyl-d14	82		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-25
Client ID: ML-1-3-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 15:38
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 07:43
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-25	Date Collected:	04/08/21 15:38
Client ID:	ML-1-3-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	**150**	Q	15-110
4-Terphenyl-d14	90		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-25	Date Collected:	04/08/21 15:38
Client ID:	ML-1-3-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 11:36		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	12.4		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	58		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-26
Client ID: MW-S38-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 16:10
Date Received: 04/08/21
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/15/21 23:41
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 17:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2117869

Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-26 Date Collected: 04/08/21 16:10

Client ID: MW-S38-04082021 Date Received: 04/08/21

Sample Location: CONCORD, MA Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	91		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2117869

Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-26	Date Collected:	04/08/21 16:10
Client ID:	MW-S38-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 17:23
Analytical Date:	04/16/21 08:02		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.12		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	0.06	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.20		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.17		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-26	Date Collected:	04/08/21 16:10
Client ID:	MW-S38-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	49		30-130
2-Fluorobiphenyl	71		30-130
2,4,6-Tribromophenol	**119**	Q	15-110
4-Terphenyl-d14	88		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-26	Date Collected:	04/08/21 16:10
Client ID:	MW-S38-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/14/21 18:00
Analytical Date:	04/17/21 12:10		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.235		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-27
Client ID: HA20-CMT-2S-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 15:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/17/21 20:07
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-27
Client ID: HA20-CMT-2S-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 15:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	51		30-130
2,4,6-Tribromophenol	89		15-110
4-Terphenyl-d14	76		30-130

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-27
Client ID: HA20-CMT-2S-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 15:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 12:45
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 18:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-27	Date Collected:	04/08/21 15:00
Client ID:	HA20-CMT-2S-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 11:50
Analytical Date:	04/17/21 23:34		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

SAMPLE RESULTS

Lab ID:	L2117869-27	Date Collected:	04/08/21 15:00
Client ID:	HA20-CMT-2S-04082021	Date Received:	04/08/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	53		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	84		15-110
4-Terphenyl-d14	88		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/15/21 18:53
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 12-13,15-17,20-23 Batch: WG1485193-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/15/21 18:53
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 12-13,15-17,20-23 Batch: WG1485193-1					
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/15/21 18:53	Extraction Date:	04/12/21 16:35
Analyst:	RS		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 12-13,15-17,20-23 Batch: WG1485193-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	125		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	101		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	95		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	95		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	91		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	94		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	94		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	88		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	91		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	91		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	89		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	64		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	97		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	44		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	69		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	86		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	83		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	125		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	133		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/17/21 21:50	Extraction Date:	04/12/21 16:35
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 12-13,15-17,20-23 Batch: WG1485193-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	52		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**2**	Q	10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**1**	Q	10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	14		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	14		10-187

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 00:33
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/13/21 20:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-07 Batch: WG1485723-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/14/21 21:01
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-05 Batch: WG1486007-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/14/21 21:01
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:13

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-05 Batch: WG1486007-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/14/21 21:01	Extraction Date:	04/14/21 08:13
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-05 Batch: WG1486007-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	60		30-130
2,4,6-Tribromophenol	65		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 14:25
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-05 Batch: WG1486021-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 14:25
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 08:19

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-05 Batch: WG1486021-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		15-110
Phenol-d6	72		15-110
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	96		30-130
2,4,6-Tribromophenol	91		15-110
4-Terphenyl-d14	125		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/15/21 01:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:12

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486113-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/15/21 01:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:12

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486113-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/15/21 01:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:12

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486113-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	84		15-110
4-Terphenyl-d14	76		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 12:34
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:14

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486116-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/15/21 12:34
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 11:14

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486116-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	69		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	72		15-110
4-Terphenyl-d14	92		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/16/21 23:18
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 04/14/21 18:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 09-22,24-27 Batch: WG1486274-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	59		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/17/21 15:55
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 07,12-13,15,27 Batch: WG1486645-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/17/21 15:55
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 07,12-13,15,27 Batch: WG1486645-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/17/21 15:55
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 07,12-13,15,27 Batch: WG1486645-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	46		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	60		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 21:11
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:50

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 07,12-13,15,27 Batch: WG1486647-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	0.05	J	ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 21:11
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:50

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 07,12-13,15,27 Batch: WG1486647-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	83		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/21 02:57
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 15-17,20-22 Batch: WG1488529-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	72		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	48		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	45		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	62		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	59		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2117869
Project Number:	3252H	**Report Date:**	05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/26/21 04:41	Extraction Date:	04/20/21 16:36
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 15-17,20-22 Batch: WG1488529-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	0.576	J	ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/26/21 04:41
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 15-17,20-22 Batch: WG1488529-1					
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/26/21 04:41
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 15-17,20-22 Batch: WG1488529-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	90		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	108		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	109		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	110		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	94		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	92		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	103		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	109		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	83		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	88		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	139		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	68		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	90		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	63		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	91		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	92		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	117		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	111		10-206

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/22/21 08:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 05,18 Batch: WG1489093-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/22/21 08:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 05,18 Batch: WG1489093-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/22/21 08:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 05,18 Batch: WG1489093-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	31		15-110
Nitrobenzene-d5	42		30-130
2-Fluorobiphenyl	41		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	43		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 11:54
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 05,18 Batch: WG1489095-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	0.03	J	ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	0.01	J	ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	0.02	J	ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 11:54
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 05,18 Batch: WG1489095-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	48		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	54		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 Batch: WG1485193-2								
Perfluorobutanoic Acid (PFBA)	91		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	88		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	89		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	96		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	92		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	103		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	90		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	101		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	90		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	110		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	96		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	89		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	95		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	91		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	104		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	94		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	90		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	89		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	94		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	89		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	77		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	88		-		67-153	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 Batch: WG1485193-2								
Perfluorotridecanoic Acid (PFTrDA)	91		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	92		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	109		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	89		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	112		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	46		-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	112		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	**190**	Q	-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	95		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	100		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 Batch: WG1485193-2

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	90				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	119				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	99				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	95				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	92				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	91				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	87				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	85				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	88				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	86				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	92				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	64				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	94				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	47				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	78				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	95				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	85				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	101				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	134				10-206

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 Batch: WG1485193-2								
Perfluorooctanesulfonamide (FOSA)	89		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	113		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	113		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	109		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	112		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	62				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**2**	Q			10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**2**	Q			10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	18				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	19				10-187

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-07 Batch: WG1485723-2 WG1485723-3								
1,4-Dioxane	120		122		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	51		48		15-110

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-05 Batch: WG1486007-2 WG1486007-3								
Acenaphthene	61		74		40-140	19		20
1,2,4-Trichlorobenzene	58		69		40-140	17		20
Hexachlorobenzene	65		74		40-140	13		20
Bis(2-chloroethyl)ether	60		73		40-140	20		20
2-Chloronaphthalene	64		76		40-140	17		20
1,2-Dichlorobenzene	54		66		40-140	20		20
1,3-Dichlorobenzene	53		65		40-140	20		20
1,4-Dichlorobenzene	52		65		40-140	**22**	Q	20
3,3'-Dichlorobenzidine	**27**	Q	59		40-140	**74**	Q	20
2,4-Dinitrotoluene	75		86		40-140	14		20
2,6-Dinitrotoluene	81		96		40-140	17		20
Azobenzene	68		79		40-140	15		20
Fluoranthene	65		77		40-140	17		20
4-Bromophenyl phenyl ether	67		78		40-140	15		20
Bis(2-chloroisopropyl)ether	63		78		40-140	**21**	Q	20
Bis(2-chloroethoxy)methane	66		78		40-140	17		20
Hexachlorobutadiene	52		65		40-140	**22**	Q	20
Hexachloroethane	54		68		40-140	**23**	Q	20
Isophorone	63		76		40-140	19		20
Naphthalene	56		71		40-140	**24**	Q	20
Nitrobenzene	68		87		40-140	**25**	Q	20
Bis(2-ethylhexyl)phthalate	80		91		40-140	13		20
Butyl benzyl phthalate	81		93		40-140	14		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-05 Batch: WG1486007-2 WG1486007-3								
Di-n-butylphthalate	70		80		40-140	13		20
Di-n-octylphthalate	82		90		40-140	9		20
Diethyl phthalate	72		83		40-140	14		20
Dimethyl phthalate	75		84		40-140	11		20
Benzo(a)anthracene	66		76		40-140	14		20
Benzo(a)pyrene	63		74		40-140	16		20
Benzo(b)fluoranthene	66		79		40-140	18		20
Benzo(k)fluoranthene	63		71		40-140	12		20
Chrysene	62		73		40-140	16		20
Acenaphthylene	65		76		40-140	16		20
Anthracene	62		76		40-140	20		20
Benzo(ghi)perylene	61		73		40-140	18		20
Fluorene	63		75		40-140	17		20
Phenanthrene	61		74		40-140	19		20
Dibenzo(a,h)anthracene	62		74		40-140	18		20
Indeno(1,2,3-cd)pyrene	62		74		40-140	18		20
Pyrene	63		74		40-140	16		20
Aniline	**16**	Q	**39**	Q	40-140	**84**	Q	20
4-Chloroaniline	**30**	Q	41		40-140	**31**	Q	20
Dibenzofuran	61		72		40-140	17		20
2-Methylnaphthalene	60		73		40-140	20		20
Acetophenone	61		76		40-140	**22**	Q	20
2,4,6-Trichlorophenol	73		86		30-130	16		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-05 Batch: WG1486007-2 WG1486007-3								
2-Chlorophenol	60		78		30-130	**26**	Q	20
2,4-Dichlorophenol	75		88		30-130	16		20
2,4-Dimethylphenol	52		73		30-130	**34**	Q	20
2-Nitrophenol	83		106		30-130	**24**	Q	20
4-Nitrophenol	72		80		30-130	11		20
2,4-Dinitrophenol	85		77		30-130	10		20
Pentachlorophenol	80		77		30-130	4		20
Phenol	43		58		30-130	**30**	Q	20
2-Methylphenol	59		75		30-130	**24**	Q	20
3-Methylphenol/4-Methylphenol	64		79		30-130	**21**	Q	20
2,4,5-Trichlorophenol	78		88		30-130	12		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	64		79		15-110
Phenol-d6	53		69		15-110
Nitrobenzene-d5	69		84		30-130
2-Fluorobiphenyl	62		71		30-130
2,4,6-Tribromophenol	92		102		15-110
4-Terphenyl-d14	64		72		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-05 Batch: WG1486021-2 WG1486021-3								
Acenaphthene	116		110		40-140	5		20
2-Chloronaphthalene	110		104		40-140	6		20
Fluoranthene	133		131		40-140	2		20
Hexachlorobutadiene	98		93		40-140	5		20
Naphthalene	102		97		40-140	5		20
Benzo(a)anthracene	124		124		40-140	0		20
Benzo(a)pyrene	136		133		40-140	2		20
Benzo(b)fluoranthene	136		135		40-140	1		20
Benzo(k)fluoranthene	**141**	Q	138		40-140	2		20
Chrysene	126		126		40-140	0		20
Acenaphthylene	119		113		40-140	5		20
Anthracene	127		125		40-140	2		20
Benzo(ghi)perylene	126		127		40-140	1		20
Fluorene	122		117		40-140	4		20
Phenanthrene	123		121		40-140	2		20
Dibenzo(a,h)anthracene	135		134		40-140	1		20
Indeno(1,2,3-cd)pyrene	132		132		40-140	0		20
Pyrene	134		132		40-140	2		20
2-Methylnaphthalene	110		105		40-140	5		20
Pentachlorophenol	91		92		30-130	1		20
Hexachlorobenzene	121		116		40-140	4		20
Hexachloroethane	91		87		40-140	4		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-05 Batch: WG1486021-2 WG1486021-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	100		92		15-110
Phenol-d6	89		83		15-110
Nitrobenzene-d5	102		97		30-130
2-Fluorobiphenyl	110		103		30-130
2,4,6-Tribromophenol	**127**	Q	**121**	Q	15-110
4-Terphenyl-d14	**137**	Q	**134**	Q	30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486113-2 WG1486113-3								
Acenaphthene	76		91		40-140	18		20
1,2,4-Trichlorobenzene	75		93		40-140	**21**	Q	20
Hexachlorobenzene	91		102		40-140	11		20
Bis(2-chloroethyl)ether	73		92		40-140	**23**	Q	20
2-Chloronaphthalene	79		106		40-140	**29**	Q	20
1,2-Dichlorobenzene	72		98		40-140	**31**	Q	20
1,3-Dichlorobenzene	71		88		40-140	**21**	Q	20
1,4-Dichlorobenzene	71		87		40-140	20		20
3,3'-Dichlorobenzidine	61		78		40-140	**24**	Q	20
2,4-Dinitrotoluene	93		104		40-140	11		20
2,6-Dinitrotoluene	86		110		40-140	**24**	Q	20
Azobenzene	86		101		40-140	16		20
Fluoranthene	88		92		40-140	4		20
4-Bromophenyl phenyl ether	90		102		40-140	13		20
Bis(2-chloroisopropyl)ether	62		84		40-140	**30**	Q	20
Bis(2-chloroethoxy)methane	73		84		40-140	14		20
Hexachlorobutadiene	78		99		40-140	**24**	Q	20
Hexachloroethane	74		98		40-140	**28**	Q	20
Isophorone	76		101		40-140	**28**	Q	20
Naphthalene	75		89		40-140	17		20
Nitrobenzene	72		109		40-140	**41**	Q	20
Bis(2-ethylhexyl)phthalate	76		84		40-140	10		20
Butyl benzyl phthalate	84		88		40-140	5		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486113-2 WG1486113-3								
Di-n-butylphthalate	81		84		40-140	4		20
Di-n-octylphthalate	76		88		40-140	15		20
Diethyl phthalate	94		105		40-140	11		20
Dimethyl phthalate	95		119		40-140	**22**	Q	20
Benzo(a)anthracene	87		95		40-140	9		20
Benzo(a)pyrene	105		120		40-140	13		20
Benzo(b)fluoranthene	90		102		40-140	13		20
Benzo(k)fluoranthene	98		109		40-140	11		20
Chrysene	93		105		40-140	12		20
Acenaphthylene	80		105		40-140	**27**	Q	20
Anthracene	88		100		40-140	13		20
Benzo(ghi)perylene	102		118		40-140	15		20
Fluorene	84		102		40-140	19		20
Phenanthrene	86		97		40-140	12		20
Dibenzo(a,h)anthracene	106		110		40-140	4		20
Indeno(1,2,3-cd)pyrene	105		102		40-140	3		20
Pyrene	87		91		40-140	4		20
Aniline	**32**	Q	**35**	Q	40-140	9		20
4-Chloroaniline	63		62		40-140	2		20
Dibenzofuran	80		99		40-140	**21**	Q	20
2-Methylnaphthalene	76		105		40-140	**32**	Q	20
Acetophenone	81		105		40-140	**26**	Q	20
2,4,6-Trichlorophenol	85		108		30-130	**24**	Q	20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486113-2 WG1486113-3								
2-Chlorophenol	78		104		30-130	**29**	Q	20
2,4-Dichlorophenol	82		110		30-130	**29**	Q	20
2,4-Dimethylphenol	72		74		30-130	3		20
2-Nitrophenol	84		113		30-130	**29**	Q	20
4-Nitrophenol	95		106		30-130	11		20
2,4-Dinitrophenol	83		100		30-130	19		20
Pentachlorophenol	78		93		30-130	18		20
Phenol	59		67		30-130	13		20
2-Methylphenol	74		94		30-130	**24**	Q	20
3-Methylphenol/4-Methylphenol	82		104		30-130	**24**	Q	20
2,4,5-Trichlorophenol	87		118		30-130	**30**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	82		**111**	Q	15-110
Phenol-d6	69		77		15-110
Nitrobenzene-d5	74		105		30-130
2-Fluorobiphenyl	78		102		30-130
2,4,6-Tribromophenol	109		**129**	Q	15-110
4-Terphenyl-d14	81		84		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486116-2 WG1486116-3								
Acenaphthene	92		83		40-140	10		20
2-Chloronaphthalene	88		79		40-140	11		20
Fluoranthene	105		93		40-140	12		20
Hexachlorobutadiene	82		74		40-140	10		20
Naphthalene	85		75		40-140	13		20
Benzo(a)anthracene	96		90		40-140	6		20
Benzo(a)pyrene	102		94		40-140	8		20
Benzo(b)fluoranthene	103		99		40-140	4		20
Benzo(k)fluoranthene	111		96		40-140	14		20
Chrysene	104		91		40-140	13		20
Acenaphthylene	92		84		40-140	9		20
Anthracene	101		90		40-140	12		20
Benzo(ghi)perylene	101		93		40-140	8		20
Fluorene	95		87		40-140	9		20
Phenanthrene	98		88		40-140	11		20
Dibenzo(a,h)anthracene	106		96		40-140	10		20
Indeno(1,2,3-cd)pyrene	99		92		40-140	7		20
Pyrene	106		94		40-140	12		20
2-Methylnaphthalene	89		80		40-140	11		20
Pentachlorophenol	71		56		30-130	**24**	Q	20
Hexachlorobenzene	96		86		40-140	11		20
Hexachloroethane	76		69		40-140	10		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 06,09-11,14,16-22,24-26 Batch: WG1486116-2 WG1486116-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	77		70		15-110
Phenol-d6	67		61		15-110
Nitrobenzene-d5	81		73		30-130
2-Fluorobiphenyl	88		79		30-130
2,4,6-Tribromophenol	106		91		15-110
4-Terphenyl-d14	110		98		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 09-22,24-27 Batch: WG1486274-2 WG1486274-3								
1,4-Dioxane	115		116		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	47		55		15-110

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 07,12-13,15,27 Batch: WG1486645-2 WG1486645-3								
Acenaphthene	73		71		40-140	3		20
1,2,4-Trichlorobenzene	60		60		40-140	0		20
Hexachlorobenzene	77		76		40-140	1		20
Bis(2-chloroethyl)ether	70		67		40-140	4		20
2-Chloronaphthalene	67		66		40-140	2		20
1,2-Dichlorobenzene	55		59		40-140	7		20
1,3-Dichlorobenzene	53		55		40-140	4		20
1,4-Dichlorobenzene	55		57		40-140	4		20
3,3'-Dichlorobenzidine	52		58		40-140	11		20
2,4-Dinitrotoluene	89		87		40-140	2		20
2,6-Dinitrotoluene	89		86		40-140	3		20
Azobenzene	79		77		40-140	3		20
Fluoranthene	82		81		40-140	1		20
4-Bromophenyl phenyl ether	80		75		40-140	6		20
Bis(2-chloroisopropyl)ether	73		74		40-140	1		20
Bis(2-chloroethoxy)methane	74		72		40-140	3		20
Hexachlorobutadiene	55		54		40-140	2		20
Hexachloroethane	54		54		40-140	0		20
Isophorone	72		70		40-140	3		20
Naphthalene	63		63		40-140	0		20
Nitrobenzene	80		79		40-140	1		20
Bis(2-ethylhexyl)phthalate	93		94		40-140	1		20
Butyl benzyl phthalate	96		89		40-140	8		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 07,12-13,15,27 Batch: WG1486645-2 WG1486645-3								
Di-n-butylphthalate	85		84		40-140	1		20
Di-n-octylphthalate	91		90		40-140	1		20
Diethyl phthalate	84		81		40-140	4		20
Dimethyl phthalate	83		78		40-140	6		20
Benzo(a)anthracene	82		82		40-140	0		20
Benzo(a)pyrene	82		83		40-140	1		20
Benzo(b)fluoranthene	80		83		40-140	4		20
Benzo(k)fluoranthene	84		82		40-140	2		20
Chrysene	80		82		40-140	2		20
Acenaphthylene	70		68		40-140	3		20
Anthracene	80		79		40-140	1		20
Benzo(ghi)perylene	81		85		40-140	5		20
Fluorene	75		72		40-140	4		20
Phenanthrene	78		77		40-140	1		20
Dibenzo(a,h)anthracene	83		86		40-140	4		20
Indeno(1,2,3-cd)pyrene	84		88		40-140	5		20
Pyrene	81		78		40-140	4		20
Aniline	**27**	Q	**27**	Q	40-140	0		20
4-Chloroaniline	50		48		40-140	4		20
Dibenzofuran	72		71		40-140	1		20
2-Methylnaphthalene	64		64		40-140	0		20
Acetophenone	71		70		40-140	1		20
2,4,6-Trichlorophenol	78		78		30-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 07,12-13,15,27 Batch: WG1486645-2 WG1486645-3								
2-Chlorophenol	73		70		30-130	4		20
2,4-Dichlorophenol	81		80		30-130	1		20
2,4-Dimethylphenol	34		50		30-130	**38**	Q	20
2-Nitrophenol	96		98		30-130	2		20
4-Nitrophenol	85		81		30-130	5		20
2,4-Dinitrophenol	110		106		30-130	4		20
Pentachlorophenol	94		90		30-130	4		20
Phenol	56		54		30-130	4		20
2-Methylphenol	64		65		30-130	2		20
3-Methylphenol/4-Methylphenol	72		73		30-130	1		20
2,4,5-Trichlorophenol	84		82		30-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	77		74		15-110
Phenol-d6	69		66		15-110
Nitrobenzene-d5	80		78		30-130
2-Fluorobiphenyl	70		67		30-130
2,4,6-Tribromophenol	109		105		15-110
4-Terphenyl-d14	80		76		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 07,12-13,15,27 Batch: WG1486647-2 WG1486647-3								
Acenaphthene	79		77		40-140	3		20
2-Chloronaphthalene	75		74		40-140	1		20
Fluoranthene	95		97		40-140	2		20
Hexachlorobutadiene	69		68		40-140	1		20
Naphthalene	70		69		40-140	1		20
Benzo(a)anthracene	86		89		40-140	3		20
Benzo(a)pyrene	89		91		40-140	2		20
Benzo(b)fluoranthene	90		95		40-140	5		20
Benzo(k)fluoranthene	94		94		40-140	0		20
Chrysene	94		96		40-140	2		20
Acenaphthylene	79		75		40-140	5		20
Anthracene	85		85		40-140	0		20
Benzo(ghi)perylene	89		90		40-140	1		20
Fluorene	85		83		40-140	2		20
Phenanthrene	85		85		40-140	0		20
Dibenzo(a,h)anthracene	91		96		40-140	5		20
Indeno(1,2,3-cd)pyrene	88		90		40-140	2		20
Pyrene	98		100		40-140	2		20
2-Methylnaphthalene	72		71		40-140	1		20
Pentachlorophenol	105		108		30-130	3		20
Hexachlorobenzene	80		79		40-140	1		20
Hexachloroethane	62		60		40-140	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 07,12-13,15,27 Batch: WG1486647-2 WG1486647-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	66		65		15-110
Phenol-d6	64		62		15-110
Nitrobenzene-d5	103		99		30-130
2-Fluorobiphenyl	73		71		30-130
2,4,6-Tribromophenol	**112**	Q	110		15-110
4-Terphenyl-d14	102		105		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-17,20-22 Batch: WG1488529-2								
Perfluorooctanesulfonamide (FOSA)	87		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	107		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	110		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	103		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	107		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	70				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	43				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	40				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	58				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	55				10-187

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-17,20-22 Batch: WG1488529-2								
Perfluorobutanoic Acid (PFBA)	110		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	108		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	115		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	115		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	111		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	112		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	109		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	123		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	110		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	123		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	100		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	110		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	113		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	106		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	123		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	111		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	136		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	110		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	109		-		38-156	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	117		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	108		-		67-153	-		30
Perfluorotridecanoic Acid (PFTrDA)	119		-		48-158	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-17,20-22 Batch: WG1488529-2								
Perfluorotetradecanoic Acid (PFTA)	110		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	120		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	114		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	127		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	48		-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	136		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	177		-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	104		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	105		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-17,20-22 Batch: WG1488529-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	87				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	103				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	108				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	107				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	93				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	91				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	98				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	86				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	108				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	82				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	88				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	125				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	60				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	87				55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	66				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	88				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	84				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	94				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	116				10-206

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 05,18 Batch: WG1489093-2 WG1489093-3								
Acenaphthene	82		91		40-140	10		20
1,2,4-Trichlorobenzene	84		84		40-140	0		20
Hexachlorobenzene	99		108		40-140	9		20
Bis(2-chloroethyl)ether	79		74		40-140	7		20
2-Chloronaphthalene	88		92		40-140	4		20
1,2-Dichlorobenzene	83		77		40-140	8		20
1,3-Dichlorobenzene	79		72		40-140	9		20
1,4-Dichlorobenzene	79		74		40-140	7		20
3,3'-Dichlorobenzidine	55		88		40-140	**46**	Q	20
2,4-Dinitrotoluene	93		104		40-140	11		20
2,6-Dinitrotoluene	93		97		40-140	4		20
Azobenzene	95		108		40-140	13		20
Fluoranthene	88		106		40-140	19		20
4-Bromophenyl phenyl ether	99		102		40-140	3		20
Bis(2-chloroisopropyl)ether	67		67		40-140	0		20
Bis(2-chloroethoxy)methane	75		77		40-140	3		20
Hexachlorobutadiene	87		84		40-140	4		20
Hexachloroethane	79		72		40-140	9		20
Isophorone	81		81		40-140	0		20
Naphthalene	83		86		40-140	4		20
Nitrobenzene	79		83		40-140	5		20
Bis(2-ethylhexyl)phthalate	76		80		40-140	5		20
Butyl benzyl phthalate	80		94		40-140	16		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 05,18 Batch: WG1489093-2 WG1489093-3								
Di-n-butylphthalate	77		87		40-140	12		20
Di-n-octylphthalate	78		86		40-140	10		20
Diethyl phthalate	94		106		40-140	12		20
Dimethyl phthalate	98		102		40-140	4		20
Benzo(a)anthracene	86		101		40-140	16		20
Benzo(a)pyrene	104		131		40-140	**23**	Q	20
Benzo(b)fluoranthene	96		112		40-140	15		20
Benzo(k)fluoranthene	92		117		40-140	**24**	Q	20
Chrysene	92		108		40-140	16		20
Acenaphthylene	88		94		40-140	7		20
Anthracene	90		104		40-140	14		20
Benzo(ghi)perylene	96		132		40-140	**32**	Q	20
Fluorene	92		103		40-140	11		20
Phenanthrene	88		100		40-140	13		20
Dibenzo(a,h)anthracene	97		127		40-140	**27**	Q	20
Indeno(1,2,3-cd)pyrene	88		126		40-140	**36**	Q	20
Pyrene	86		103		40-140	18		20
Aniline	**17**	Q	49		40-140	**97**	Q	20
4-Chloroaniline	52		79		40-140	**41**	Q	20
Dibenzofuran	89		100		40-140	12		20
2-Methylnaphthalene	82		87		40-140	6		20
Acetophenone	84		84		40-140	0		20
2,4,6-Trichlorophenol	98		102		30-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 05,18 Batch: WG1489093-2 WG1489093-3								
2-Chlorophenol	87		92		30-130	6		20
2,4-Dichlorophenol	94		91		30-130	3		20
2,4-Dimethylphenol	84		80		30-130	5		20
2-Nitrophenol	95		98		30-130	3		20
4-Nitrophenol	82		92		30-130	11		20
2,4-Dinitrophenol	106		116		30-130	9		20
Pentachlorophenol	98		102		30-130	4		20
Phenol	62		66		30-130	6		20
2-Methylphenol	75		82		30-130	9		20
3-Methylphenol/4-Methylphenol	80		84		30-130	5		20
2,4,5-Trichlorophenol	102		109		30-130	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	91		92		15-110
Phenol-d6	69		71		15-110
Nitrobenzene-d5	82		84		30-130
2-Fluorobiphenyl	82		86		30-130
2,4,6-Tribromophenol	**123**	Q	**135**	Q	15-110
4-Terphenyl-d14	82		93		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 05,18 Batch: WG1489095-2 WG1489095-3								
Acenaphthene	56		52		40-140	7		20
2-Chloronaphthalene	58		53		40-140	9		20
Fluoranthene	62		63		40-140	2		20
Hexachlorobutadiene	58		50		40-140	15		20
Naphthalene	55		49		40-140	12		20
Benzo(a)anthracene	56		58		40-140	4		20
Benzo(a)pyrene	55		60		40-140	9		20
Benzo(b)fluoranthene	56		62		40-140	10		20
Benzo(k)fluoranthene	62		64		40-140	3		20
Chrysene	58		64		40-140	10		20
Acenaphthylene	58		54		40-140	7		20
Anthracene	55		57		40-140	4		20
Benzo(ghi)perylene	54		57		40-140	5		20
Fluorene	59		57		40-140	3		20
Phenanthrene	55		57		40-140	4		20
Dibenzo(a,h)anthracene	57		59		40-140	3		20
Indeno(1,2,3-cd)pyrene	53		56		40-140	6		20
Pyrene	65		65		40-140	0		20
2-Methylnaphthalene	56		50		40-140	11		20
Pentachlorophenol	76		74		30-130	3		20
Hexachlorobenzene	55		54		40-140	2		20
Hexachloroethane	51		45		40-140	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 05,18 Batch: WG1489095-2 WG1489095-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	53		47		15-110
Phenol-d6	45		40		15-110
Nitrobenzene-d5	80		71		30-130
2-Fluorobiphenyl	56		49		30-130
2,4,6-Tribromophenol	86		89		15-110
4-Terphenyl-d14	69		72		30-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 QC Batch ID: WG1485193-3 QC Sample: L2117869-12 Client ID: MW-BS7-2-04082021												
Perfluorobutanoic Acid (PFBA)	0.416J	37	34.1	91		-	-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	0.552J	37	33.6	89		-	-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	0.395J	32.8	30.2	91		-	-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	34.6	32.8	95		-	-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	0.922JF	37	35.4	93		-	-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	0.251J	34.8	32.1	92		-	-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	0.420J	37	34.3	92		-	-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	1.78JF	33.8	34.7	97		-	-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	2.06	37	37.2	95		-	-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	18.0	35.2	56.2	108		-	-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	35.2	31.8	90		-	-		61-179	-		30
Perfluorononanoic Acid (PFNA)	ND	37	33.6	91		-	-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	1.26J	34.3	32.6	91		-	-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	ND	37	33.9	92		-	-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	35.5	36.2	102		-	-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	35.6	30.2	85		-	-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	37	33.1	90		-	-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	37	32.7	88		-	-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	35.7	32.0	90		-	-		38-156	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	37	31.8	86		-	-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	ND	37	30.3	82		-	-		67-153	-		30
Perfluorotridecanoic Acid (PFTrDA)	ND	37	30.9	84		-	-		48-158	-		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 QC Batch ID: WG1485193-3 QC Sample: L2117869-12 Client ID: MW-BS7-2-04082021												
Perfluorotetradecanoic Acid (PFTA)	ND	37	35.5	96		-	-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	740	806	109		-	-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	34.9	29.0	83		-	-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	37	43.9	119		-	-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	ND	37	21.9	59		-	-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	35.8	35.0	98		-	-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	35.7	39.6	111		-	-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	34.5	32.7	95		-	-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	34.9	32.3	92		-	-		52-156	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	134				10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	92				12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	119				14-147
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	55				10-165
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	55				27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	48				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	82				55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	74				62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**56**	Q			57-129

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 QC Batch ID: WG1485193-3 QC Sample: L2117869-12
Client ID: MW-BS7-2-04082021

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	61				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	81				71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	83				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	66				22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	86				10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	68				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	87				62-163
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	68				62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	74				59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	75				70-131

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 QC Batch ID: WG1485193-3 QC Sample: L2117869-12 Client ID: MW-BS7-2-04082021												
Perfluorooctanesulfonamide (FOSA)	ND	37	33.6	91		-	-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	370	435	118		-	-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	370	421	114		-	-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	370	465	126		-	-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	370	424	115		-	-		66-176	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	15				10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	**8**	Q			10-189
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**6**	Q			10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**3**	Q			10-161
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	23				10-112

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 06,09-11,14,16-22,24-26 QC Batch ID: WG1486113-4 WG1486113-5 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
1,2,4-Trichlorobenzene	ND	18.2	12	66		14	77		40-140	15		20
Bis(2-chloroethyl)ether	ND	18.2	13	72		14	77		40-140	7		20
1,2-Dichlorobenzene	ND	18.2	12	66		13	72		40-140	8		20
1,3-Dichlorobenzene	ND	18.2	12	66		13	72		40-140	8		20
1,4-Dichlorobenzene	ND	18.2	12	66		13	72		40-140	8		20
3,3'-Dichlorobenzidine	ND	18.2	9.1	50		11	61		40-140	19		20
2,4-Dinitrotoluene	ND	18.2	15	83		16	88		40-140	6		20
2,6-Dinitrotoluene	ND	18.2	16	88		17	94		40-140	6		20
Azobenzene	ND	18.2	14	77		15	83		40-140	7		20
4-Bromophenyl phenyl ether	ND	18.2	14	77		15	83		40-140	7		20
Bis(2-chloroisopropyl)ether	ND	18.2	14	77		15	83		40-140	7		20
Bis(2-chloroethoxy)methane	ND	18.2	13	72		15	83		40-140	14		20
Isophorone	ND	18.2	13	72		14	77		40-140	7		20
Nitrobenzene	ND	18.2	15	83		17	94		40-140	13		20
Bis(2-ethylhexyl)phthalate	ND	18.2	18	99		19	100		40-140	5		20
Butyl benzyl phthalate	ND	18.2	17	94		19	100		40-140	11		20
Di-n-butylphthalate	ND	18.2	15	83		16	88		40-140	6		20
Di-n-octylphthalate	ND	18.2	18	99		19	100		40-140	5		20
Diethyl phthalate	ND	18.2	14	77		16	88		40-140	13		20
Dimethyl phthalate	ND	18.2	14	77		15	83		40-140	7		20
Aniline	ND	18.2	2.8	**15**	Q	3.1	**17**	Q	40-140	10		20
4-Chloroaniline	ND	18.2	6.6	**36**	Q	6.8	**37**	Q	40-140	3		20
Dibenzofuran	ND	18.2	13	72		14	77		40-140	7		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 06,09-11,14,16-22,24-26 QC Batch ID: WG1486113-4 WG1486113-5 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
Acetophenone	ND	18.2	13	72		14	77		40-140	7		20
2,4,6-Trichlorophenol	ND	18.2	14	77		16	88		30-130	13		20
2-Chlorophenol	ND	18.2	14	77		15	83		30-130	7		20
2,4-Dichlorophenol	ND	18.2	15	83		17	94		30-130	13		20
2,4-Dimethylphenol	ND	18.2	12	66		13	72		30-130	8		20
2-Nitrophenol	ND	18.2	19	100		21	120		30-130	10		20
4-Nitrophenol	ND	18.2	16	88		16	88		30-130	0		20
2,4-Dinitrophenol	ND	18.2	21	120		22	120		30-130	5		20
Phenol	ND	18.2	9.7	53		11	61		30-130	13		20
2-Methylphenol	ND	18.2	12	66		14	77		30-130	15		20
3-Methylphenol/4-Methylphenol	ND	18.2	13	72		15	83		30-130	14		20
2,4,5-Trichlorophenol	ND	18.2	15	83		16	88		30-130	6		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	**115**	Q	**120**	Q	15-110
2-Fluorobiphenyl	71		76		30-130
2-Fluorophenol	83		90		15-110
4-Terphenyl-d14	76		83		30-130
Nitrobenzene-d5	88		94		30-130
Phenol-d6	69		74		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 06,09-11,14,16-22,24-26 QC Batch ID: WG1486116-4 WG1486116-5 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
Acenaphthene	ND	18.2	12	66		14	77		40-140	15		20
2-Chloronaphthalene	ND	18.2	13	72		15	83		40-140	14		20
Fluoranthene	ND	18.2	14	77		17	94		40-140	19		20
Hexachlorobutadiene	ND	18.2	12	66		14	77		40-140	15		20
Naphthalene	ND	18.2	11	61		13	72		40-140	17		20
Benzo(a)anthracene	ND	18.2	13	72		15	83		40-140	14		20
Benzo(a)pyrene	ND	18.2	15	83		17	94		40-140	13		20
Benzo(b)fluoranthene	ND	18.2	13	72		16	88		40-140	**21**	Q	20
Benzo(k)fluoranthene	ND	18.2	14	77		16	88		40-140	13		20
Chrysene	ND	18.2	13	72		15	83		40-140	14		20
Acenaphthylene	ND	18.2	13	72		15	83		40-140	14		20
Anthracene	ND	18.2	13	72		16	88		40-140	**21**	Q	20
Benzo(ghi)perylene	ND	18.2	14	77		17	94		40-140	19		20
Fluorene	ND	18.2	13	72		15	83		40-140	14		20
Phenanthrene	ND	18.2	11	61		13	72		40-140	17		20
Dibenzo(a,h)anthracene	ND	18.2	15	83		18	99		40-140	18		20
Indeno(1,2,3-cd)pyrene	ND	18.2	15	83		18	99		40-140	18		20
Pyrene	ND	18.2	14	77		17	94		40-140	19		20
2-Methylnaphthalene	ND	18.2	12	66		14	77		40-140	15		20
Pentachlorophenol	ND	18.2	23	130		26	**140**	Q	30-130	12		20
Hexachlorobenzene	ND	18.2	13	72		15	83		40-140	14		20
Hexachloroethane	ND	18.2	9.9	54		12	66		40-140	19		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 06,09-11,14,16-22,24-26 QC Batch ID: WG1486116-4 WG1486116-5 QC Sample: L2117869-19 Client ID: MW-S64-04082021												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	**150**	Q	**170**	Q	15-110
2-Fluorobiphenyl	73		83		30-130
2-Fluorophenol	75		85		15-110
4-Terphenyl-d14	82		95		30-130
Nitrobenzene-d5	66		75		30-130
Phenol-d6	63		71		15-110

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 09-22,24-27 QC Batch ID: WG1486274-4 WG1486274-5 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
1,4-Dioxane	2.02	5	7.93	118		8.08	116		30-140	2		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		49		15-110

Matrix Spike Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-17,20-22 QC Batch ID: WG1488529-3 WG1488529-4 QC Sample: L2119881-04 Client ID: MS Sample												
Perfluorooctanesulfonamide (FOSA)	1.35JF	34.4	34.1	95		35.9F	98		46-170	5		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	344	356	103		377	107		10-185	6		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	344	356	103		372	106		10-202	4		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	344	338	98		368	104		10-209	8		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	344	358	104		383	109		66-176	7		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	54		53		10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	55		56		10-189
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	54		54		10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	57		53		10-161
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	65		68		10-112

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-17,20-22 QC Batch ID: WG1488529-3 WG1488529-4 QC Sample: L2119881-04 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	7.98	34.4	48.6	118		48.0	114		67-148	1		30
Perfluoropentanoic Acid (PFPeA)	23.4	34.4	63.8	117		62.7	111		63-161	2		30
Perfluorobutanesulfonic Acid (PFBS)	6.62	30.6	42.8	118		43.1	117		65-157	1		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	32.2	40.6	126		38.7	117		37-219	5		30
Perfluorohexanoic Acid (PFHxA)	19.6	34.4	60.7	119		58.7	111		69-168	3		30
Perfluoropentanesulfonic Acid (PFPeS)	0.577J	32.4	40.3	123		39.4	117		52-156	2		30
Perfluoroheptanoic Acid (PFHpA)	4.57	34.4	45.5	119		45.0	115		58-159	1		30
Perfluorohexanesulfonic Acid (PFHxS)	5.63	31.5	47.8	134		47.7	131		69-177	0		30
Perfluorooctanoic Acid (PFOA)	13.1	34.4	53.4	117		52.9	113		63-159	1		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	32.8	45.2	138		40.5	121		49-187	11		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	32.8	37.8	115		38.0	113		61-179	1		30
Perfluorononanoic Acid (PFNA)	7.31	34.4	47.8	118		47.8	115		68-171	0		30
Perfluorooctanesulfonic Acid (PFOS)	12.9	32	51.7	121		49.3	111		52-151	5		30
Perfluorodecanoic Acid (PFDA)	0.998J	34.4	42.9	122		40.4	112		63-171	6		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	33	40.6	123		47.8	141		56-173	16		30
Perfluorononanesulfonic Acid (PFNS)	ND	33.1	38.9	117		39.5	116		48-150	2		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	34.4	44.3	129		45.4	129		60-166	2		30
Perfluoroundecanoic Acid (PFUnA)	ND	34.4	39.5	115		40.3	114		60-153	2		30
Perfluorodecanesulfonic Acid (PFDS)	ND	33.2	34.6	104		36.9	109		38-156	6		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	34.4	37.0	107		41.7	118		45-170	12		30
Perfluorododecanoic Acid (PFDoA)	ND	34.4	38.3	111		39.4	112		67-153	3		30
Perfluorotridecanoic Acid (PFTrDA)	ND	34.4	43.8	127		43.6	124		48-158	0		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-17,20-22 QC Batch ID: WG1488529-3 WG1488529-4 QC Sample: L2119881-04 Client ID: MS Sample												
Perfluorotetradecanoic Acid (PFTA)	ND	34.4	39.8	116		40.2	114		59-182	1		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	689	767	111		826	117		57-162	7		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	32.5	36.3	112		36.9	111		69-143	2		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	34.4	48.0	139		47.4	134		40-167	1		30
Perfluorooctadecanoic Acid (PFODA)	ND	34.4	38.8	113		35.6	101		10-119	9		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	33.3	42.8	128		42.9	126		85-154	0		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	33.2	54.9	165		46.4	137		81-188	17		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	32.1	35.0	109		35.0	107		55-158	0		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	32.5	33.4	103		36.0	108		52-156	7		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	109		110		10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	83		78		12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	100		96		14-147
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	77		85		10-165
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	48		43		27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	46		43		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	82		79		55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	72		76		62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	66		72		57-129

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-17,20-22 QC Batch ID: WG1488529-3 WG1488529-4 QC Sample: L2119881-04 Client ID: MS Sample												

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	69		73		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	92		95		71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	80		79		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	69		66		22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	99		90		10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	70		73		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	83		89		62-163
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		92		69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	70		75		62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	68		74		59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	104		102		70-131

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 QC Batch ID: WG1485193-4 QC Sample: L2117869-13 Client ID: MW-S21-04082021						
Perfluorobutanoic Acid (PFBA)	ND	ND	ng/l	NC		30
Perfluoropentanoic Acid (PFPeA)	ND	ND	ng/l	NC		30
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/l	NC		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	ng/l	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/l	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 QC Batch ID: WG1485193-4 QC Sample: L2117869-13 Client ID: MW-S21-04082021						
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	ND	ng/l	NC		30
Perfluorooctadecanoic Acid (PFODA)	ND	ND	ng/l	NC		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	82		81		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	80		80		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91		89		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	72		69		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	70		69		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	79		79		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	112		87		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		86		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	95		86		14-147

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 QC Batch ID: WG1485193-4 QC Sample: L2117869-13 Client ID: MW-S21-04082021

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	87		89		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	97		94		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	87		88		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	107		103		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	60		61		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	96		98		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	55		59		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	91		97		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	87		81		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	95		92		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	129		124		10-206

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 12-13,15-17,20-23 QC Batch ID: WG1485193-4 QC Sample: L2117869-13 Client ID: MW-S21-04082021						
Perfluorooctanesulfonamide (FOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	31		29		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**1**	Q	**1**	Q	10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**1**	Q	**1**	Q	10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	**5**	Q	**5**	Q	10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	**5**	Q	**5**	Q	10-187

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-01
Client ID: MW-S02-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	32.4		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 05:07	44,353.2	MR
Nitrogen, Nitrate	1.5		mg/l	0.10	0.023	1	-	04/09/21 05:07	44,353.2	MR
Phosphorus, Total	0.041		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:47	121,4500P-E	SD
Phosphorus, Orthophosphate	0.022		mg/l	0.005	0.001	1	-	04/09/21 07:22	121,4500P-E	AW
Dissolved Organic Carbon	0.78	J	mg/l	1.0	0.04	1	-	04/19/21 14:55	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.028	J	mg/l	0.050	0.013	1	-	04/14/21 19:06	44,300.0	SH
Chloride	7.26		mg/l	0.500	0.083	1	-	04/14/21 19:05	44,300.0	SH
Fluoride	0.052		mg/l	0.050	0.037	1	-	04/14/21 19:05	44,300.0	SH
Sulfate	26.6		mg/l	1.00	0.454	1	-	04/14/21 19:05	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-02
Client ID: MW-S02-04072021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/07/21 15:45
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	31.1		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 05:08	44,353.2	MR
Nitrogen, Nitrate	1.6		mg/l	0.10	0.023	1	-	04/09/21 05:08	44,353.2	MR
Phosphorus, Total	0.031		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:48	121,4500P-E	SD
Phosphorus, Orthophosphate	0.022		mg/l	0.005	0.001	1	-	04/09/21 07:23	121,4500P-E	AW
Dissolved Organic Carbon	0.79	J	mg/l	1.0	0.04	1	-	04/19/21 15:23	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.028	J	mg/l	0.050	0.013	1	-	04/14/21 19:55	44,300.0	SH
Chloride	7.87		mg/l	0.500	0.083	1	-	04/14/21 19:54	44,300.0	SH
Fluoride	0.051		mg/l	0.050	0.037	1	-	04/14/21 19:54	44,300.0	SH
Sulfate	26.7		mg/l	1.00	0.454	1	-	04/14/21 19:54	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-03
Client ID: MW-BS46-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 16:15
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 05:09	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 05:09	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-04 Date Collected: 04/07/21 17:40
Client ID: MW-S08-04072021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 05:11	44,353.2	MR
Nitrogen, Nitrate	0.30		mg/l	0.10	0.023	1	-	04/09/21 05:11	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-05
Client ID: MW-BS51-04072021
Sample Location: CONCORD, MA
Date Collected: 04/07/21 17:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 05:12	44,353.2	MR
Nitrogen, Nitrate	0.097	J	mg/l	0.10	0.023	1	-	04/09/21 05:12	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-06
Client ID: MW-S16-04072021
Sample Location: CONCORD, MA

Date Collected: 04/07/21 17:40
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	21.8		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 05:13	44,353.2	MR
Nitrogen, Nitrate	1.7		mg/l	0.10	0.023	1	-	04/09/21 05:13	44,353.2	MR
Phosphorus, Total	0.043		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:50	121,4500P-E	SD
Phosphorus, Orthophosphate	0.018		mg/l	0.005	0.001	1	-	04/09/21 07:23	121,4500P-E	AW
Dissolved Organic Carbon	0.57	J	mg/l	1.0	0.04	1	-	04/19/21 15:50	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/14/21 20:07	44,300.0	SH
Chloride	70.0		mg/l	5.00	0.839	10	-	04/14/21 21:18	44,300.0	SH
Fluoride	0.055		mg/l	0.050	0.037	1	-	04/14/21 20:06	44,300.0	SH
Sulfate	16.6		mg/l	1.00	0.454	1	-	04/14/21 20:06	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-07
Client ID: MW-S19-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 09:10
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 06:25	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 06:25	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-09
Client ID: MW-BS02-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 09:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	207.		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 06:40	44,353.2	MR
Nitrogen, Nitrate	0.043	J	mg/l	0.10	0.023	1	-	04/09/21 06:40	44,353.2	MR
Phosphorus, Total	0.034		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:51	121,4500P-E	SD
Phosphorus, Orthophosphate	0.030		mg/l	0.005	0.001	1	-	04/09/21 07:24	121,4500P-E	AW
Dissolved Organic Carbon	0.56	J	mg/l	1.0	0.04	1	-	04/19/21 16:16	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.040	J	mg/l	0.050	0.013	1	-	04/14/21 20:19	44,300.0	SH
Chloride	18.4		mg/l	0.500	0.083	1	-	04/14/21 20:18	44,300.0	SH
Fluoride	0.164		mg/l	0.050	0.037	1	-	04/14/21 20:18	44,300.0	SH
Sulfate	67.3		mg/l	1.00	0.454	1	-	04/14/21 20:18	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-10
Client ID: MW-SD46-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 10:15
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.017	J	mg/l	0.050	0.014	1	-	04/09/21 06:36	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 06:36	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-11
Client ID: MW-T24-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 10:30
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.044	J	mg/l	0.050	0.014	1	-	04/09/21 06:34	44,353.2	MR
Nitrogen, Nitrate	1.3		mg/l	0.10	0.023	1	-	04/09/21 06:34	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-12
Client ID: MW-BS7-2-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 10:25
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	107.		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	4.7		mg/l	0.050	0.014	1	-	04/09/21 06:41	44,353.2	MR
Nitrogen, Nitrate	43.		mg/l	2.5	0.57	25	-	04/09/21 06:56	44,353.2	MR
Phosphorus, Total	0.027		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:52	121,4500P-E	SD
Phosphorus, Orthophosphate	0.009		mg/l	0.005	0.001	1	-	04/09/21 07:24	121,4500P-E	AW
Dissolved Organic Carbon	1.0		mg/l	1.0	0.04	1	-	04/19/21 16:46	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.500	0.132	10	-	04/14/21 21:31	44,300.0	SH
Chloride	35.2		mg/l	0.500	0.083	1	-	04/14/21 20:30	44,300.0	SH
Fluoride	0.355		mg/l	0.050	0.037	1	-	04/14/21 20:30	44,300.0	SH
Sulfate	121.		mg/l	10.0	4.54	10	-	04/14/21 21:30	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-13
Client ID: MW-S21-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 11:30
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	8.30		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 06:45	44,353.2	MR
Nitrogen, Nitrate	0.16		mg/l	0.10	0.023	1	-	04/09/21 06:57	44,353.2	MR
Phosphorus, Total	0.017		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:55	121,4500P-E	SD
Phosphorus, Orthophosphate	0.011		mg/l	0.005	0.001	1	-	04/09/21 07:24	121,4500P-E	AW
Dissolved Organic Carbon	0.47	J	mg/l	1.0	0.04	1	-	04/19/21 19:00	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.027	J	mg/l	0.050	0.013	1	-	04/14/21 20:43	44,300.0	SH
Chloride	3.08		mg/l	0.500	0.083	1	-	04/14/21 20:42	44,300.0	SH
Fluoride	0.049	J	mg/l	0.050	0.037	1	-	04/14/21 20:42	44,300.0	SH
Sulfate	5.70		mg/l	1.00	0.454	1	-	04/14/21 20:42	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-14
Client ID: ML-1-2-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 09:35
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 05:53	44,353.2	MR
Nitrogen, Nitrate	2.3		mg/l	0.10	0.023	1	-	04/09/21 06:27	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2117869
Project Number: 3252H
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-15
Client ID: GZW-7-2-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 12:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	102.		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	1.9		mg/l	0.050	0.014	1	-	04/09/21 06:51	44,353.2	MR
Nitrogen, Nitrate	53.		mg/l	2.5	0.57	25	-	04/09/21 07:00	44,353.2	MR
Phosphorus, Total	0.240		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:56	121,4500P-E	SD
Phosphorus, Orthophosphate	0.019		mg/l	0.005	0.001	1	-	04/09/21 07:24	121,4500P-E	AW
Dissolved Organic Carbon	2.0		mg/l	1.0	0.04	1	-	04/19/21 19:28	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.500	0.132	10	-	04/14/21 23:32	44,300.0	SH
Chloride	34.6		mg/l	0.500	0.083	1	-	04/14/21 22:31	44,300.0	SH
Fluoride	0.379		mg/l	0.050	0.037	1	-	04/14/21 22:31	44,300.0	SH
Sulfate	161.		mg/l	10.0	4.54	10	-	04/14/21 23:31	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-16
Client ID: EQ BLANK1-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	21.9		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 06:26	44,353.2	MR
Nitrogen, Nitrate	0.16		mg/l	0.10	0.023	1	-	04/09/21 06:26	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:58	121,4500P-E	SD
Phosphorus, Orthophosphate	0.003	J	mg/l	0.005	0.001	1	-	04/09/21 07:25	121,4500P-E	AW
Dissolved Organic Carbon	0.22	J	mg/l	1.0	0.04	1	-	04/19/21 19:56	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/14/21 23:44	44,300.0	SH
Chloride	9.11		mg/l	0.500	0.083	1	-	04/14/21 23:43	44,300.0	SH
Fluoride	0.114		mg/l	0.050	0.037	1	-	04/14/21 23:43	44,300.0	SH
Sulfate	4.09		mg/l	1.00	0.454	1	-	04/14/21 23:43	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-17 Date Collected: 04/08/21 10:45
Client ID: MW-BS34-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 05:49	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 06:23	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2117869
Project Number: 3252H | **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-18
Client ID: MW-SD43-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 13:25
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 06:32	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 06:32	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-19
Client ID: MW-S64-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 14:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	11.5		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 05:31	44,353.2	MR
Nitrogen, Nitrate	0.66		mg/l	0.10	0.023	1	-	04/09/21 05:31	44,353.2	MR
Phosphorus, Total	0.013		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:59	121,4500P-E	SD
Phosphorus, Orthophosphate	0.004	J	mg/l	0.005	0.001	1	-	04/09/21 07:26	121,4500P-E	AW
Dissolved Organic Carbon	0.77	J	mg/l	1.0	0.04	1	-	04/19/21 20:28	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/14/21 18:54	44,300.0	SH
Chloride	5.03		mg/l	0.500	0.083	1	-	04/14/21 18:53	44,300.0	SH
Fluoride	0.070		mg/l	0.050	0.037	1	-	04/14/21 18:53	44,300.0	SH
Sulfate	25.6		mg/l	1.00	0.454	1	-	04/14/21 18:53	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-20
Client ID: MW-BS21-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 14:15
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	80.6		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 06:39	44,353.2	MR
Nitrogen, Nitrate	0.25		mg/l	0.10	0.023	1	-	04/09/21 06:39	44,353.2	MR
Phosphorus, Total	0.050		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 13:02	121,4500P-E	SD
Phosphorus, Orthophosphate	0.014		mg/l	0.005	0.001	1	-	04/09/21 07:26	121,4500P-E	AW
Dissolved Organic Carbon	0.91	J	mg/l	1.0	0.04	1	-	04/19/21 20:56	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.041	J	mg/l	0.050	0.013	1	-	04/14/21 22:44	44,300.0	SH
Chloride	67.8		mg/l	5.00	0.839	10	-	04/15/21 00:20	44,300.0	SH
Fluoride	0.113		mg/l	0.050	0.037	1	-	04/14/21 22:43	44,300.0	SH
Sulfate	38.0		mg/l	1.00	0.454	1	-	04/14/21 22:43	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-21
Client ID: MW-SD34-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 14:20
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.015	J	mg/l	0.050	0.014	1	-	04/09/21 06:22	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 06:22	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-22
Client ID: MW-SD34-04082021DUP
Sample Location: CONCORD, MA
Date Collected: 04/08/21 14:25
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 06:16	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 06:16	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-24 Date Collected: 04/08/21 15:10
Client ID: BEW-1-04082021 Date Received: 04/08/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	105.		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	0.90		mg/l	0.050	0.014	1	-	04/09/21 06:53	44,353.2	MR
Nitrogen, Nitrate	20.		mg/l	0.50	0.11	5	-	04/09/21 07:04	44,353.2	MR
Phosphorus, Total	0.013		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 13:02	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/09/21 07:26	121,4500P-E	AW
Dissolved Organic Carbon	0.72	J	mg/l	1.0	0.04	1	-	04/19/21 21:23	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	25.3		mg/l	0.500	0.083	1	-	04/14/21 22:55	44,300.0	SH
Fluoride	0.215		mg/l	0.050	0.037	1	-	04/14/21 22:55	44,300.0	SH
Sulfate	83.3		mg/l	1.00	0.454	1	-	04/14/21 22:55	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-25
Client ID: ML-1-3-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 15:38
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.023	J	mg/l	0.050	0.014	1	-	04/09/21 06:35	44,353.2	MR
Nitrogen, Nitrate	0.052	J	mg/l	0.10	0.023	1	-	04/09/21 06:35	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-26
Client ID: MW-S38-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 16:10
Date Received: 04/08/21
Field Prep: None

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 06:38	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 06:38	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.046	J	mg/l	0.050	0.013	1	-	04/14/21 23:08	44,300.0	SH
Chloride	69.9		mg/l	5.00	0.839	10	-	04/15/21 00:32	44,300.0	SH
Fluoride	0.074		mg/l	0.050	0.037	1	-	04/14/21 23:07	44,300.0	SH
Sulfate	25.6		mg/l	1.00	0.454	1	-	04/14/21 23:07	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

SAMPLE RESULTS

Lab ID: L2117869-27
Client ID: HA20-CMT-2S-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 15:00
Date Received: 04/08/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	69.4		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 07:01	44,353.2	MR
Nitrogen, Nitrate	0.89		mg/l	0.10	0.023	1	-	04/09/21 07:01	44,353.2	MR
Phosphorus, Total	0.029		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 13:03	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/09/21 07:27	121,4500P-E	AW
Dissolved Organic Carbon	5.9		mg/l	1.0	0.04	1	-	04/19/21 21:53	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.059		mg/l	0.050	0.013	1	-	04/14/21 23:20	44,300.0	SH
Chloride	70.2		mg/l	5.00	0.839	10	-	04/15/21 00:44	44,300.0	SH
Fluoride	0.181		mg/l	0.050	0.037	1	-	04/14/21 23:19	44,300.0	SH
Sulfate	27.9		mg/l	1.00	0.454	1	-	04/14/21 23:19	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2117869
Project Number: 3252H **Report Date:** 05/24/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG1484148-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:52	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG1484149-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:49	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 07,09-15,17 Batch: WG1484150-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:52	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 07,09-15,17 Batch: WG1484151-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:49	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 16,18-21 Batch: WG1484152-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:55	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 16,18-21 Batch: WG1484153-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:57	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 22,24-27 Batch: WG1484154-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/09/21 03:57	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 22,24-27 Batch: WG1484155-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/09/21 03:55	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-02,06,09,12-13,15-16,19-20,24,27 Batch: WG1484204-1										
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/09/21 07:22	121,4500P-E	AW
General Chemistry - Westborough Lab for sample(s): 01-02,06,09,12-13,15-16,19-20,24,27 Batch: WG1486142-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/14/21 10:40	04/15/21 12:45	121,4500P-E	SD
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02,06,09,12-13 Batch: WG1486385-1										
Chloride	0.218	J	mg/l	0.500	0.083	1	-	04/14/21 17:53	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/14/21 17:53	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/14/21 17:53	44,300.0	SH
Anions by Ion Chromatography - Westborough Lab for sample(s): 15-16,19-20,24,26-27 Batch: WG1486386-1										
Chloride	0.218	J	mg/l	0.500	0.083	1	-	04/14/21 17:53	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/14/21 17:53	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/14/21 17:53	44,300.0	SH
General Chemistry - Westborough Lab for sample(s): 24,27 Batch: WG1486943-1										
Dissolved Organic Carbon	0.05	J	mg/l	1.0	0.04	1	-	04/19/21 07:15	1,9060A	DW

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02,06,09,12-13,15-16,20,24,27 Batch: WG1487156-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 19 Batch: WG1487163-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01-02,06,09,12-13,15-16,20,24,27 Batch: WG1487170-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 19 Batch: WG1487172-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01-02,06,09,12-13,15-16,19-20 Batch: WG1487965-1										
Dissolved Organic Carbon	0.05	J	mg/l	1.0	0.04	1	-	04/19/21 07:15	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02,06,09,12-13,15-16 Batch: WG1502298-1										
Bromide	ND		mg/l	0.050	0.013	1	-	04/14/21 17:53	44,300.0	SH
Anions by Ion Chromatography - Westborough Lab for sample(s): 19-20,26-27 Batch: WG1502299-1										
Bromide	ND		mg/l	0.050	0.013	1	-	04/14/21 17:53	44,300.0	SH

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG1484148-2								
Nitrogen, Nitrite	94		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG1484149-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 07,09-15,17 Batch: WG1484150-2								
Nitrogen, Nitrite	94		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 07,09-15,17 Batch: WG1484151-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 16,18-21 Batch: WG1484152-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 16,18-21 Batch: WG1484153-2								
Nitrogen, Nitrite	94		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 22,24-27 Batch: WG1484154-2								
Nitrogen, Nitrite	94		-		90-110	-		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 22,24-27 Batch: WG1484155-2					
Nitrogen, Nitrate	96	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16,19-20,24,27 Batch: WG1484204-2					
Phosphorus, Orthophosphate	94	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16,19-20,24,27 Batch: WG1486142-2					
Phosphorus, Total	99	-	80-120	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02,06,09,12-13 Batch: WG1486385-2					
Chloride	102	-	90-110	-	
Fluoride	96	-	90-110	-	
Sulfate	97	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 15-16,19-20,24,26-27 Batch: WG1486386-2					
Chloride	102	-	90-110	-	
Fluoride	96	-	90-110	-	
Sulfate	97	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 24,27 Batch: WG1486943-2					
Dissolved Organic Carbon	98	-	90-110	-	

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16,19-20 Batch: WG1487965-2					
Dissolved Organic Carbon	98	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16 Batch: WG1502298-2					
Bromide	102	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 19-20,26-27 Batch: WG1502299-2					
Bromide	102	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 16,18-21 QC Batch ID: WG1484152-4 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
Nitrogen, Nitrate	0.66	4	7.2	**164**	Q	-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 16,18-21 QC Batch ID: WG1484153-4 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
Nitrogen, Nitrite	ND	4	4.9	**122**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 22,24-27 QC Batch ID: WG1484154-4 QC Sample: L2117869-22 Client ID: MW-SD34-04082021DUP												
Nitrogen, Nitrite	ND	4	4.5	112		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 22,24-27 QC Batch ID: WG1484155-4 QC Sample: L2117869-22 Client ID: MW-SD34-04082021DUP												
Nitrogen, Nitrate	ND	4	6.1	**152**	Q	-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16,19-20,24,27 QC Batch ID: WG1484204-4 WG1484204-5 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
Phosphorus, Orthophosphate	0.004J	0.5	0.513	103		0.490	98		80-120	5		20
General Chemistry - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16,19-20,24,27 QC Batch ID: WG1486142-3 QC Sample: L2117869-19 Client ID: MW-S64-04082021												
Phosphorus, Total	0.013	0.5	0.502	98		-	-		75-125	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02,06,09,12-13 QC Batch ID: WG1486385-3 WG1486385-4 QC Sample: L2117869-01 Client ID: MW-S02-04072021												
Chloride	7.26	4	11.3	101		11.3	101		90-110	0		18
Fluoride	0.052	0.4	0.389	**84**	Q	0.394	**85**	Q	90-110	1		15
Sulfate	26.6	8	33.5	**86**	Q	33.4	**85**	Q	90-110	0		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery		Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 15-16,19-20,24,26-27 QC Batch ID: WG1486386-3 WG1486386-4 QC Sample: L2117869-19 Client ID: MW-S64-04082021											
Chloride	5.03	4	9.00	99		9.06	101		90-110	1	18
Fluoride	0.070	0.4	0.369	**75**	Q	0.402	**83**	Q	90-110	9	15
Sulfate	25.6	8	32.4	**86**	Q	32.6	**88**	Q	90-110	1	20
General Chemistry - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16,19-20 QC Batch ID: WG1487965-4 QC Sample: L2117869-19 Client ID: MW-S64-04082021											
Dissolved Organic Carbon	0.77J	4	4.2	105		-	-		80-120	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16 QC Batch ID: WG1502298-3 WG1502298-4 QC Sample: L2117869-01 Client ID: MW-S02-04072021											
Bromide	0.028J	0.4	0.320	**80**	Q	0.319	**80**	Q	90-110	0	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 19-20,26-27 QC Batch ID: WG1502299-3 WG1502299-4 QC Sample: L2117869-19 Client ID: MW-S64-04082021											
Bromide	ND	0.4	0.318	**80**	Q	0.319	**80**	Q	90-110	0	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 16,18-21 QC Batch ID: WG1484152-3 QC Sample: L2117869-19 Client ID: MW-S64-04082021						
Nitrogen, Nitrate	0.66	0.65	mg/l	2		6
General Chemistry - Westborough Lab Associated sample(s): 16,18-21 QC Batch ID: WG1484153-3 QC Sample: L2117869-19 Client ID: MW-S64-04082021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 22,24-27 QC Batch ID: WG1484154-3 QC Sample: L2117869-22 Client ID: MW-SD34-04082021DUP						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 22,24-27 QC Batch ID: WG1484155-3 QC Sample: L2117869-22 Client ID: MW-SD34-04082021DUP						
Nitrogen, Nitrate	ND	ND	mg/l	NC		6
General Chemistry - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16,19-20,24,27 QC Batch ID: WG1484204-3 QC Sample: L2117869-19 Client ID: MW-S64-04082021						
Phosphorus, Orthophosphate	0.004J	0.003J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16,19-20,24,27 QC Batch ID: WG1486142-4 QC Sample: L2117869-19 Client ID: MW-S64-04082021						
Phosphorus, Total	0.013	0.013	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 19 QC Batch ID: WG1487163-2 QC Sample: L2117869-19 Client ID: MW-S64-04082021						
Alkalinity, Carbonate	ND	ND	mg CaCO3/L	NC		10

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2117869
Report Date: 05/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 19 QC Batch ID: WG1487172-2 QC Sample: L2117869-19 Client ID: MW-S64-04082021					
Alkalinity, Bicarbonate	11.5	12.5	mg CaCO3/L	8	9
General Chemistry - Westborough Lab Associated sample(s): 01-02,06,09,12-13,15-16,19-20 QC Batch ID: WG1487965-3 QC Sample: L2117869-19 Client ID: MW-S64-04082021					
Dissolved Organic Carbon	0.77J	0.67J	mg/l	NC	20

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent
B	Absent
C	Absent
D	Absent
E	Absent
F	Absent
G	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2117869-01A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-01B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-01C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-01D	Vial H2SO4 preserved	E	NA		4.9	Y	Absent		DOC-9060(28)
L2117869-01E	Vial H2SO4 preserved	E	NA		4.9	Y	Absent		DOC-9060(28)
L2117869-01F	Vial H2SO4 preserved	E	NA		4.9	Y	Absent		DOC-9060(28)
L2117869-01G	Plastic 250ml unpreserved/No Headspace	E	NA		4.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-01H	Plastic 250ml H2SO4 preserved	E	<2	<2	4.9	Y	Absent		TPHOS-4500(28)
L2117869-01I	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-01J	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-01K	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-01L	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-01M	Plastic 500ml unpreserved	E	6	6	4.9	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2117869-02A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-02B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-02C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-02D	Vial H2SO4 preserved	E	NA		4.9	Y	Absent		DOC-9060(28)
L2117869-02E	Vial H2SO4 preserved	E	NA		4.9	Y	Absent		DOC-9060(28)
L2117869-02F	Vial H2SO4 preserved	E	NA		4.9	Y	Absent		DOC-9060(28)
L2117869-02G	Plastic 120ml unpreserved	E	6	6	4.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-02H	Plastic 250ml unpreserved	E	6	6	4.9	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28)
L2117869-02I	Plastic 250ml unpreserved/No Headspace	E	NA		4.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-02J	Plastic 250ml H2SO4 preserved	E	<2	<2	4.9	Y	Absent		TPHOS-4500(28)
L2117869-02K	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-02L	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-02M	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-02N	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-03A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-03B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-03C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-03D	Plastic 120ml unpreserved	E	7	7	4.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-03E	Amber 250ml unpreserved	E	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-03F	Amber 250ml unpreserved	E	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-03G	Amber 250ml unpreserved	E	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-03H	Amber 250ml unpreserved	E	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-04A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-04B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-04C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-04D	Plastic 120ml unpreserved	E	6	6	4.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-04E	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-04F	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-04G	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-04H	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-05A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-05B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-05C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-05D	Plastic 120ml unpreserved	E	11	11	4.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-05E	Amber 250ml unpreserved	E	11	11	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-05F	Amber 250ml unpreserved	E	11	11	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-05G	Amber 250ml unpreserved	E	11	11	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-05H	Amber 250ml unpreserved	E	11	11	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-06A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-06B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-06C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-06D	Vial H2SO4 preserved	E	NA		4.9	Y	Absent		DOC-9060(28)
L2117869-06E	Vial H2SO4 preserved	E	NA		4.9	Y	Absent		DOC-9060(28)
L2117869-06F	Vial H2SO4 preserved	E	NA		4.9	Y	Absent		DOC-9060(28)
L2117869-06G	Plastic 250ml unpreserved/No Headspace	E	NA		4.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-06H	Plastic 250ml H2SO4 preserved	E	<2	<2	4.9	Y	Absent		TPHOS-4500(28)
L2117869-06I	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-06J	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-06K	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-06L	Amber 250ml unpreserved	E	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-06M	Plastic 500ml unpreserved	E	6	6	4.9	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2117869-07A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-07B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-07C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-07D	Plastic 120ml unpreserved	E	7	7	4.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-07E	Amber 250ml unpreserved	E	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-07F	Amber 250ml unpreserved	E	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-07G	Amber 250ml unpreserved	E	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-07H	Amber 250ml unpreserved	E	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-08A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-08B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-09A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-09B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-09C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-09D	Vial H2SO4 preserved	F	NA		2.9	Y	Absent		DOC-9060(28)
L2117869-09E	Vial H2SO4 preserved	F	NA		2.9	Y	Absent		DOC-9060(28)
L2117869-09F	Vial H2SO4 preserved	F	NA		2.9	Y	Absent		DOC-9060(28)
L2117869-09G	Plastic 250ml unpreserved/No Headspace	F	NA		2.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-09H	Plastic 250ml H2SO4 preserved	F	<2	<2	2.9	Y	Absent		TPHOS-4500(28)
L2117869-09I	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-09J	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-09K	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-09L	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-09M	Plastic 500ml unpreserved	F	7	7	2.9	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2117869-10A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-10B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-10C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-10D	Plastic 120ml unpreserved	F	7	7	2.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-10E	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-10F	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-10G	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-10H	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-11A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-11B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-11C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-11D	Plastic 120ml unpreserved	F	7	7	2.9	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-11E	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-11F	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-11G	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-11H	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-12A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-12B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-12C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-12D	Vial H2SO4 preserved	F	NA		2.9	Y	Absent		DOC-9060(28)
L2117869-12E	Vial H2SO4 preserved	F	NA		2.9	Y	Absent		DOC-9060(28)
L2117869-12F	Vial H2SO4 preserved	F	NA		2.9	Y	Absent		DOC-9060(28)
L2117869-12G	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-12H	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-12I	Plastic 250ml unpreserved/No Headspace	F	NA		2.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-12J	Plastic 250ml H2SO4 preserved	F	<2	<2	2.9	Y	Absent		TPHOS-4500(28)
L2117869-12K	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-12L	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-12M	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-12N	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-12O	Plastic 500ml unpreserved	F	7	7	2.9	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2117869-13A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-13B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-13C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-13D	Vial H2SO4 preserved	F	NA		2.9	Y	Absent		DOC-9060(28)
L2117869-13E	Vial H2SO4 preserved	F	NA		2.9	Y	Absent		DOC-9060(28)
L2117869-13F	Vial H2SO4 preserved	F	NA		2.9	Y	Absent		DOC-9060(28)
L2117869-13G	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-13H	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-13I	Plastic 250ml unpreserved/No Headspace	F	NA		2.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-13J	Plastic 250ml H2SO4 preserved	F	<2	<2	2.9	Y	Absent		TPHOS-4500(28)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-13K	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-13L	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-13M	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-13N	Amber 250ml unpreserved	F	7	7	2.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-13O	Plastic 500ml unpreserved	F	7	7	2.9	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2117869-14A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-14B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-14C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-14D	Plastic 120ml unpreserved	B	7	7	4.8	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-14E	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-14F	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-14G	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-14H	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-15A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-15B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-15C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-15D	Vial H2SO4 preserved	B	NA		4.8	Y	Absent		DOC-9060(28)
L2117869-15E	Vial H2SO4 preserved	B	NA		4.8	Y	Absent		DOC-9060(28)
L2117869-15F	Vial H2SO4 preserved	B	NA		4.8	Y	Absent		DOC-9060(28)
L2117869-15G	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-15H	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-15I	Plastic 250ml unpreserved/No Headspace	B	NA		4.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-15J	Plastic 250ml H2SO4 preserved	B	<2	<2	4.8	Y	Absent		TPHOS-4500(28)
L2117869-15K	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-15L	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-15M	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-15N	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-15O	Plastic 500ml unpreserved	B	7	7	4.8	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-16A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-16B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-16C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-16D	Vial H2SO4 preserved	B	NA		4.8	Y	Absent		DOC-9060(28)
L2117869-16E	Vial H2SO4 preserved	B	NA		4.8	Y	Absent		DOC-9060(28)
L2117869-16F	Vial H2SO4 preserved	B	NA		4.8	Y	Absent		DOC-9060(28)
L2117869-16G	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-16H	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-16I	Plastic 120ml unpreserved	B	7	7	4.8	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-16J	Plastic 250ml unpreserved	B	7	7	4.8	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28)
L2117869-16K	Plastic 250ml unpreserved/No Headspace	B	NA		4.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-16L	Plastic 250ml H2SO4 preserved	B	<2	<2	4.8	Y	Absent		TPHOS-4500(28)
L2117869-16M	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-16N	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-16O	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-16P	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-17A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-17B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-17C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-17D	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-17E	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-17F	Plastic 120ml unpreserved	G	7	7	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-17G	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-17H	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-17I	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-17J	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-18A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-18B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-18C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-18D	Plastic 120ml unpreserved	B	7	7	4.8	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-18E	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-18F	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-18G	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-18H	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-19A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-19A1	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-19A2	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-19B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-19B1	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-19B2	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-19C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-19C1	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-19C2	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-19D	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-19D1	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-19D2	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-19E	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-19E1	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-19E2	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-19F	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-19F1	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-19F2	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-19G	Plastic 250ml unpreserved/No Headspace	A	NA		3.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-19G1	Plastic 250ml unpreserved/No Headspace	A	NA		3.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-19G2	Plastic 250ml unpreserved/No Headspace	A	NA		3.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-19H	Plastic 250ml H2SO4 preserved	A	<2	<2	3.8	Y	Absent		TPHOS-4500(28)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-19H1	Plastic 250ml H2SO4 preserved	A	<2	<2	3.8	Y	Absent		TPHOS-4500(28)
L2117869-19H2	Plastic 250ml H2SO4 preserved	A	<2	<2	3.8	Y	Absent		TPHOS-4500(28)
L2117869-19I	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-19I1	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-19I2	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-19J	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-19J1	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-19J2	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-19K	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-19K1	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-19K2	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-19L	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-19L1	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-19L2	Amber 250ml unpreserved	A	6	6	3.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-19M	Plastic 500ml unpreserved	A	6	6	3.8	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2117869-19M1	Plastic 120ml unpreserved	A	6	6	3.8	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-19M2	Plastic 120ml unpreserved	A	6	6	3.8	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-19N1	Plastic 250ml unpreserved	A	6	6	3.8	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28)
L2117869-19N2	Plastic 250ml unpreserved	A	6	6	3.8	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28)
L2117869-20A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-20B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-20C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-20D	Vial H2SO4 preserved	B	NA		4.8	Y	Absent		DOC-9060(28)
L2117869-20E	Vial H2SO4 preserved	B	NA		4.8	Y	Absent		DOC-9060(28)
L2117869-20F	Vial H2SO4 preserved	B	NA		4.8	Y	Absent		DOC-9060(28)
L2117869-20G	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-20H	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-20I	Plastic 250ml unpreserved/No Headspace	B	NA		4.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-20J	Plastic 250ml H2SO4 preserved	B	<2	<2	4.8	Y	Absent		TPHOS-4500(28)
L2117869-20K	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-20L	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-20M	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-20N	Amber 250ml unpreserved	B	7	7	4.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-20O	Plastic 500ml unpreserved	B	7	7	4.8	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2117869-21A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-21B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-21C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-21D	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-21E	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-21F	Plastic 120ml unpreserved	G	7	7	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-21G	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-21H	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-21I	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-21J	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-22A	Vial HCl preserved	D	NA		2.6	Y	Absent		HOLD-8260(14)
L2117869-22B	Vial HCl preserved	D	NA		2.6	Y	Absent		HOLD-8260(14)
L2117869-22C	Vial HCl preserved	D	NA		2.6	Y	Absent		HOLD-8260(14)
L2117869-22D	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-22E	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2117869-22F	Plastic 120ml unpreserved	G	7	7	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-22G	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-22H	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-22I	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-22J	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-23A	Plastic 250ml unpreserved	C	NA		3.1	Y	Absent		A2-537-ISOTOPE-36(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2117869
Report Date: 05/24/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-24A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-24B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-24C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-24D	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-24E	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-24F	Vial H2SO4 preserved	A	NA		3.8	Y	Absent		DOC-9060(28)
L2117869-24G	Plastic 250ml unpreserved/No Headspace	A	NA		3.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-24H	Plastic 250ml H2SO4 preserved	A	<2	<2	3.8	Y	Absent		TPHOS-4500(28)
L2117869-24I	Amber 250ml unpreserved	A	7	7	3.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-24J	Amber 250ml unpreserved	A	7	7	3.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-24K	Amber 250ml unpreserved	A	7	7	3.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-24L	Amber 250ml unpreserved	A	7	7	3.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-24M	Plastic 500ml unpreserved	A	7	7	3.8	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2117869-25A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-25B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-25C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-25D	Plastic 120ml unpreserved	G	7	7	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-25E	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-25F	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-25G	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-25H	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-26A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-26B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-26C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-26D	Plastic 120ml unpreserved	G	6	6	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2117869-26E	Plastic 250ml unpreserved	G	6	6	5.5	Y	Absent		SO4-300(28),CL-300(28),F-300(28)
L2117869-26F	Amber 250ml unpreserved	G	6	6	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-26G	Amber 250ml unpreserved	G	6	6	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2117869-26H	Amber 250ml unpreserved	G	6	6	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-26I	Amber 250ml unpreserved	G	6	6	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-27A	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-27B	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-27C	Vial HCl preserved	D	NA		2.6	Y	Absent		MCP-8260-10(14)
L2117869-27D	Vial H2SO4 preserved	G	NA		5.5	Y	Absent		DOC-9060(28)
L2117869-27E	Vial H2SO4 preserved	G	NA		5.5	Y	Absent		DOC-9060(28)
L2117869-27F	Vial H2SO4 preserved	G	NA		5.5	Y	Absent		DOC-9060(28)
L2117869-27G	Plastic 250ml unpreserved/No Headspace	G	NA		5.5	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2117869-27H	Plastic 250ml H2SO4 preserved	G	<2	<2	5.5	Y	Absent		TPHOS-4500(28)
L2117869-27I	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-27J	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2117869-27K	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-27L	Amber 250ml unpreserved	G	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2117869-27M	Plastic 500ml unpreserved	G	7	7	5.5	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)

*Values in parentheses indicate holding time in days

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/8/21

ALPHA Job #: L2117869

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
17869-01	MW-S02-04072021	4/7/2021	15:40	GW	RM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
02	MW-S02-04072021DUP	4/7/2021	15:45	GW	RM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
03	MW-BS46-04072021	4/7/2021	16:15	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
04	MW-S08-04072021	4/7/2021	17:40	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		6
05	MW-BS51-04072021	4/7/2021	17:35	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
06	MW-S16-04072021	4/7/2021	17:40	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
07	MW-S19-04082021	4/8/2021	9:10	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		6
08	Trip Blank1-04082021	3/30/21	–	TB	PC	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		2
09	MW-BS02-04082021	4/8/2021	9:30	GW	RM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
10	MW-SD46-04082021	4/8/2021	10:15	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/8/21 1655	[signature] AAL	4/8/21 1655
[signature] AAL	4/8/21 1810	[signature] WOOD	4/8/21 1810

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 5-JAN-18)

CHAIN OF COUNTODY

PAGE 2 OF 3

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/8/21

ALPHA Job #: L2117869

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
7869-11	MW-T24-04082021	4/8/2021	10:30	GW	ELL	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
12	MW-BS7-2-04082021	4/8/2021	10:25	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
13	MW-S21-04082021	4/8/2021	11:30	GW	PB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
14	ML-1-2-04082021	4/8/2021	9:35	GW	GKW	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
15	GZW-7-2-04082021	4/8/2021	12:00	GW	GKW	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
16	EQ Blank1-04082021	4/8/2021	14:00	EB	NH	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
17	MW-BS34-04082021	4/8/2021	10:45	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
18	MW-SD43-04082021	4/8/2021	13:25	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
19	MW-S64-04082021	4/8/2021	14:00	GW	RM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	MS/MSD	42
20	MW-BS21-04082021	4/8/2021	14:15	GW	PB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/8/21 1655	TZ AAL	4/8/21 1655
TZ AAL	4-8-21 1810	Melvin Lwow	4/8/21 1810

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF CUSTODY

PAGE 3 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/8/21

ALPHA Job #: L2117869

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client Info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
17869-21	MW-SD34-04082021	4/8/2021	14:20	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
22	MW-SD34-04082021DUP	4/8/2021	14:25	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
23	Field Blank1-04082021	4/8/2021	14:20	GW	DAP	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐		2
24	BEW-1-04082021	4/8/2021	15:10	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
25	ML-1-3-04082021	4/8/2021	15:38	GW	GKW	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
26	MW-S38-04082021	4/8/2021	16:10	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
27	HA20-CMT-2S-04082021	4/8/2021	15:00	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible signature]	4/8/21 1655	[illegible signature]	4/8/21 1655
[illegible signature]	4/8/21 1810	[illegible signature]	4/8/21 1810

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117869**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487775-5**	**Lab File ID**	**: VQ210418A05**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/18/21 04:55**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487775-3LCS	WG1487775-3	04/18/21 03:24
WG1487775-4LCSD	WG1487775-4	04/18/21 03:54
TRIP BLANK1-04082021	L2117869-08	04/18/21 05:25
MW-S02-04072021	L2117869-01	04/18/21 06:56
MW-S02-04072021 DUP	L2117869-02	04/18/21 07:26
MW-BS46-04072021	L2117869-03	04/18/21 07:56
MW-S08-04072021	L2117869-04	04/18/21 08:26
MW-BS51-04072021	L2117869-05	04/18/21 08:57
MW-S16-04072021	L2117869-06	04/18/21 09:27
MW-S19-04082021	L2117869-07	04/18/21 09:57
MW-BS02-04082021	L2117869-09	04/18/21 10:28
MW-SD46-04082021	L2117869-10	04/18/21 10:58
MW-T24-04082021	L2117869-11	04/18/21 11:28
MW-BS7-2-04082021	L2117869-12	04/18/21 11:59
MW-S21-04082021	L2117869-13	04/18/21 12:29
ML-1-2-04082021	L2117869-14	04/18/21 13:00
GZW-7-2-04082021	L2117869-15	04/18/21 13:30
EQ BLANK1-04082021	L2117869-16	04/18/21 14:01

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117869**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1488231-5**	**Lab File ID**	**: VQ210419N04**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/19/21 16:10**

Client Sample No.	Lab Sample ID	Analysis Date
WG1488231-3LCS	WG1488231-3	04/19/21 14:39
WG1488231-4LCSD	WG1488231-4	04/19/21 15:09
MW-BS34-04082021	L2117869-17	04/19/21 20:44
MW-SD43-04082021	L2117869-18	04/19/21 21:14
MW-BS21-04082021	L2117869-20	04/19/21 21:44
MW-SD34-04082021	L2117869-21	04/19/21 22:14
BEW-1-04082021	L2117869-24	04/19/21 23:15
ML-1-3-04082021	L2117869-25	04/19/21 23:45

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117869**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1488309-5**	**Lab File ID**	**: VQ210420A05**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/20/21 06:10**

Client Sample No.	Lab Sample ID	Analysis Date
WG1488309-3LCS	WG1488309-3	04/20/21 04:39
WG1488309-4LCSD	WG1488309-4	04/20/21 05:09
MW-S64-04082021	L2117869-19	04/20/21 07:10
MW-S64-04082021MS	WG1488309-6	04/20/21 14:16
MW-S64-04082021MSD	WG1488309-7	04/20/21 14:46

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2117869**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1488695-5**	**Lab File ID**	**: VQ210420N04**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/20/21 17:39**

Client Sample No.	Lab Sample ID	Analysis Date
WG1488695-3LCS	WG1488695-3	04/20/21 16:08
WG1488695-4LCSD	WG1488695-4	04/20/21 16:38
MW-S38-04082021	L2117869-26	04/20/21 18:10
HA20-CMT-2S-04082021	L2117869-27	04/20/21 18:40

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117869	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: QUIMBY	Calibration Date	: 04/18/21 03:24	
Lab File ID	: VQ210418A02	Init. Calib. Date(s)	: 04/11/21	04/11/21
Sample No	: WG1487775-2	Init. Calib. Times	: 16:44	21:47
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	107	0
Dichlorodifluoromethane	0.715	0.532	-	25.6*	20	74	0
Chloromethane	1.089	0.893	-	18	20	84	0
Vinyl chloride	0.844	0.699	-	17.2	20	83	0
Bromomethane	0.461	0.312	-	32.3*	20	69	0
Chloroethane	0.521	0.435	-	16.5	20	84	0
Trichlorofluoromethane	1.198	0.968	-	19.2	20	82	0
Ethyl ether	0.275	0.243	-	11.6	20	92	0
1,1-Dichloroethene	0.654	0.472	-	27.8*	20	74	0
Carbon disulfide	1.842	1.364	-	26*	20	76	0
Methylene chloride	0.709	0.596	-	15.9	20	86	0
Acetone	10	9.658	-	3.4	20	106	0
trans-1,2-Dichloroethene	0.781	0.613	-	21.5*	20	80	0
Methyl tert-butyl ether	1.417	1.271	-	10.3	20	96	0
Diisopropyl ether	2.883	2.686	-	6.8	20	98	0
1,1-Dichloroethane	1.547	1.308	-	15.4	20	86	0
Ethyl tert-butyl ether	2.062	1.889	-	8.4	20	96	0
cis-1,2-Dichloroethene	0.828	0.674	-	18.6	20	83	0
2,2-Dichloropropane	1.253	1.13	-	9.8	20	93	0
Bromochloromethane	0.339	0.279	-	17.7	20	84	0
Chloroform	1.426	1.188	-	16.7	20	86	0
Carbon tetrachloride	1.277	1.043	-	18.3	20	83	0
Tetrahydrofuran	0.171	0.165	-	3.5	20	104	0
Dibromofluoromethane	0.291	0.269	-	7.6	20	98	0
1,1,1-Trichloroethane	1.461	1.184	-	19	20	83	0
2-Butanone	0.19	0.19	-	0	20	103	0
1,1-Dichloropropene	1.115	0.916	-	17.8	20	85	0
Benzene	3.027	2.516	-	16.9	20	84	0
tert-Amyl methyl ether	1.521	1.362	-	10.5	20	95	0
1,2-Dichloroethane-d4	0.282	0.292	-	-3.5	20	115	0
1,2-Dichloroethane	0.858	0.798	-	7	20	97	0
Trichloroethene	0.896	0.689	-	23.1*	20	82	0
Dibromomethane	0.344	0.302	-	12.2	20	90	0
1,2-Dichloropropane	0.753	0.647	-	14.1	20	88	0
Bromodichloromethane	0.987	0.85	-	13.9	20	89	0
1,4-Dioxane	0.00307	0.00268*	-	12.7	20	93	0
cis-1,3-Dichloropropene	1.059	0.98	-	7.5	20	97	0
Chlorobenzene-d5	1	1	-	0	20	84	0
Toluene-d8	1.077	1.204	-	-11.8	20	95	0
Toluene	1.629	1.683	-	-3.3	20	83	0
4-Methyl-2-pentanone	10	10.437	-	-4.4	20	101	0
Tetrachloroethene	0.709	0.662	-	6.6	20	76	0
trans-1,3-Dichloropropene	0.736	0.834	-	-13.3	20	95	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2117869
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Instrument ID	: QUIMBY	**Calibration Date**	: 04/18/21 03:24
Lab File ID	: VQ210418A02	**Init. Calib. Date(s)**	: 04/11/21 04/11/21
Sample No	: WG1487775-2	**Init. Calib. Times**	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.325	0.36	-	-10.8	20	91	0
Chlorodibromomethane	0.512	0.543	-	-6.1	20	88	0
1,3-Dichloropropane	0.692	0.77	-	-11.3	20	93	0
1,2-Dibromoethane	0.368	0.391	-	-6.3	20	89	0
2-Hexanone	10	10.94	-	-9.4	20	106	0
Chlorobenzene	1.757	1.809	-	-3	20	83	0
Ethylbenzene	3.145	3.357	-	-6.7	20	82	0
1,1,1,2-Tetrachloroethane	0.626	0.655	-	-4.6	20	86	0
p/m Xylene	20	18.557	-	7.2	20	78	0
o Xylene	20	19.017	-	4.9	20	80	0
Styrene	20	19.683	-	1.6	20	83	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	79	0
Bromoform	0.517	0.59	-	-14.1	20	86	0
Isopropylbenzene	6.172	6.861	-	-11.2	20	79	0
4-Bromofluorobenzene	0.997	1.099	-	-10.2	20	87	0
Bromobenzene	1.257	1.404	-	-11.7	20	83	0
n-Propylbenzene	6.845	7.35	-	-7.4	20	79	0
1,1,2,2-Tetrachloroethane	0.764	0.961	-	-25.8*	20	94	0
2-Chlorotoluene	4.764	5.301	-	-11.3	20	83	0
1,3,5-Trimethylbenzene	3.876	4.02	-	-3.7	20	79	0
1,2,3-Trichloropropane	0.635	0.809	-	-27.4*	20	96	0
4-Chlorotoluene	4.01	4.46	-	-11.2	20	84	0
tert-Butylbenzene	4.263	4.377	-	-2.7	20	76	0
1,2,4-Trimethylbenzene	3.462	3.728	-	-7.7	20	82	0
sec-Butylbenzene	5.424	5.638	-	-3.9	20	77	0
p-Isopropyltoluene	10	9.199	-	8	20	77	0
1,3-Dichlorobenzene	2.441	2.631	-	-7.8	20	81	0
1,4-Dichlorobenzene	2.306	2.443	-	-5.9	20	81	0
n-Butylbenzene	10	9.885	-	1.2	20	81	0
1,2-Dichlorobenzene	2.108	2.336	-	-10.8	20	83	0
1,2-Dibromo-3-chloropropan	0.11	0.128	-	-16.4	20	87	0
Hexachlorobutadiene	0.787	0.741	-	5.8	20	75	0
1,2,4-Trichlorobenzene	0.939	1.004	-	-6.9	20	87	0
Naphthalene	1.416	1.707	-	-20.6*	20	90	0
1,2,3-Trichlorobenzene	0.783	0.905	-	-15.6	20	85	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117869	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: QUIMBY	Calibration Date	: 04/19/21 14:39	
Lab File ID	: VQ210419N01	Init. Calib. Date(s)	: 04/11/21	04/11/21
Sample No	: WG1488231-2	Init. Calib. Times	: 16:44	21:47
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	92	0
Dichlorodifluoromethane	0.715	0.493	-	31*	20	59	0
Chloromethane	1.089	0.906	-	16.8	20	73	0
Vinyl chloride	0.844	0.679	-	19.5	20	69	0
Bromomethane	0.461	0.322	-	30.2*	20	61	0
Chloroethane	0.521	0.441	-	15.4	20	73	0
Trichlorofluoromethane	1.198	0.941	-	21.5*	20	68	0
Ethyl ether	0.275	0.219	-	20.4*	20	71	0
1,1-Dichloroethene	0.654	0.456	-	30.3*	20	61	0
Carbon disulfide	1.842	1.384	-	24.9*	20	67	0
Methylene chloride	0.709	0.615	-	13.3	20	76	0
Acetone	10	9.413	-	5.9	20	88	0
trans-1,2-Dichloroethene	0.781	0.619	-	20.7*	20	69	0
Methyl tert-butyl ether	1.417	1.21	-	14.6	20	78	0
Diisopropyl ether	2.883	2.671	-	7.4	20	83	0
1,1-Dichloroethane	1.547	1.361	-	12	20	77	0
Ethyl tert-butyl ether	2.062	1.831	-	11.2	20	80	0
cis-1,2-Dichloroethene	0.828	0.68	-	17.9	20	72	0
2,2-Dichloropropane	1.253	1.158	-	7.6	20	81	0
Bromochloromethane	0.339	0.279	-	17.7	20	72	0
Chloroform	1.426	1.227	-	14	20	76	0
Carbon tetrachloride	1.277	1.047	-	18	20	71	0
Tetrahydrofuran	0.171	0.162	-	5.3	20	87	0
Dibromofluoromethane	0.291	0.28	-	3.8	20	88	0
1,1,1-Trichloroethane	1.461	1.198	-	18	20	72	0
2-Butanone	0.19	0.188	-	1.1	20	87	0
1,1-Dichloropropene	1.115	0.923	-	17.2	20	73	0
Benzene	3.027	2.598	-	14.2	20	74	0
tert-Amyl methyl ether	1.521	1.324	-	13	20	79	0
1,2-Dichloroethane-d4	0.282	0.303	-	-7.4	20	103	0
1,2-Dichloroethane	0.858	0.81	-	5.6	20	84	0
Trichloroethene	0.896	0.708	-	21*	20	72	0
Dibromomethane	0.344	0.306	-	11	20	78	0
1,2-Dichloropropane	0.753	0.669	-	11.2	20	78	0
Bromodichloromethane	0.987	0.868	-	12.1	20	78	0
1,4-Dioxane	0.00307	0.0022*	-	28.3*	20	65	0
cis-1,3-Dichloropropene	1.059	0.983	-	7.2	20	83	0
Chlorobenzene-d5	1	1	-	0	20	74	0
Toluene-d8	1.077	1.196	-	-11	20	83	0
Toluene	1.629	1.702	-	-4.5	20	73	0
4-Methyl-2-pentanone	10	9.862	-	1.4	20	83	0
Tetrachloroethene	0.709	0.651	-	8.2	20	65	0
trans-1,3-Dichloropropene	0.736	0.832	-	-13	20	82	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117869	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: QUIMBY	Calibration Date	: 04/19/21 14:39	
Lab File ID	: VQ210419N01	Init. Calib. Date(s)	: 04/11/21	04/11/21
Sample No	: WG1488231-2	Init. Calib. Times	: 16:44	21:47
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.325	0.356	-	-9.5	20	78	0
Chlorodibromomethane	0.512	0.522	-	-2	20	74	0
1,3-Dichloropropane	0.692	0.754	-	-9	20	80	0
1,2-Dibromoethane	0.368	0.384	-	-4.3	20	77	0
2-Hexanone	10	10.315	-	-3.1	20	86	0
Chlorobenzene	1.757	1.78	-	-1.3	20	72	0
Ethylbenzene	3.145	3.4	-	-8.1	20	73	0
1,1,1,2-Tetrachloroethane	0.626	0.649	-	-3.7	20	74	0
p/m Xylene	20	18.656	-	6.7	20	69	0
o Xylene	20	19.085	-	4.6	20	70	0
Styrene	20	19.613	-	1.9	20	73	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	70	0
Bromoform	0.517	0.563	-	-8.9	20	73	0
Isopropylbenzene	6.172	6.761	-	-9.5	20	69	0
4-Bromofluorobenzene	0.997	1.081	-	-8.4	20	76	0
Bromobenzene	1.257	1.344	-	-6.9	20	70	0
n-Propylbenzene	6.845	7.389	-	-7.9	20	71	0
1,1,2,2-Tetrachloroethane	0.764	0.939	-	-22.9*	20	82	0
2-Chlorotoluene	4.764	5.331	-	-11.9	20	74	0
1,3,5-Trimethylbenzene	3.876	4.04	-	-4.2	20	71	0
1,2,3-Trichloropropane	0.635	0.785	-	-23.6*	20	82	0
4-Chlorotoluene	4.01	4.445	-	-10.8	20	74	0
tert-Butylbenzene	4.263	4.272	-	-0.2	20	66	0
1,2,4-Trimethylbenzene	3.462	3.751	-	-8.3	20	73	0
sec-Butylbenzene	5.424	5.611	-	-3.4	20	68	0
p-Isopropyltoluene	10	9.115	-	8.8	20	67	0
1,3-Dichlorobenzene	2.441	2.566	-	-5.1	20	70	0
1,4-Dichlorobenzene	2.306	2.395	-	-3.9	20	71	0
n-Butylbenzene	10	10.266	-	-2.7	20	75	0
1,2-Dichlorobenzene	2.108	2.259	-	-7.2	20	71	0
1,2-Dibromo-3-chloropropan	0.11	0.113	-	-2.7	20	69	0
Hexachlorobutadiene	0.787	0.705	-	10.4	20	63	0
1,2,4-Trichlorobenzene	0.939	0.944	-	-0.5	20	72	0
Naphthalene	1.416	1.507	-	-6.4	20	71	0
1,2,3-Trichlorobenzene	0.783	0.856	-	-9.3	20	72	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117869
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/20/21 04:39
Lab File ID	: VQ210420A02	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1488309-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	91	0
Dichlorodifluoromethane	0.715	0.819	-	-14.5	20	96	0
Chloromethane	1.089	1.211	-	-11.2	20	96	0
Vinyl chloride	0.844	0.934	-	-10.7	20	93	0
Bromomethane	0.461	0.51	-	-10.6	20	96	0
Chloroethane	0.521	0.551	-	-5.8	20	90	0
Trichlorofluoromethane	1.198	1.242	-	-3.7	20	89	0
Ethyl ether	0.275	0.277	-	-0.7	20	89	0
1,1-Dichloroethene	0.654	0.588	-	10.1	20	78	0
Carbon disulfide	1.842	1.675	-	9.1	20	79	0
Methylene chloride	0.709	0.69	-	2.7	20	84	0
Acetone	10	11.092	-	-10.9	20	102	0
trans-1,2-Dichloroethene	0.781	0.722	-	7.6	20	80	0
Methyl tert-butyl ether	1.417	1.39	-	1.9	20	88	0
Diisopropyl ether	2.883	3.071	-	-6.5	20	95	0
1,1-Dichloroethane	1.547	1.564	-	-1.1	20	87	0
Ethyl tert-butyl ether	2.062	2.087	-	-1.2	20	90	0
cis-1,2-Dichloroethene	0.828	0.759	-	8.3	20	80	0
2,2-Dichloropropane	1.253	1.356	-	-8.2	20	94	0
Bromochloromethane	0.339	0.31	-	8.6	20	79	0
Chloroform	1.426	1.384	-	2.9	20	85	0
Carbon tetrachloride	1.277	1.249	-	2.2	20	84	0
Tetrahydrofuran	0.171	0.18	-	-5.3	20	96	0
Dibromofluoromethane	0.291	0.276	-	5.2	20	85	0
1,1,1-Trichloroethane	1.461	1.421	-	2.7	20	84	0
2-Butanone	0.19	0.212	-	-11.6	20	97	0
1,1-Dichloropropene	1.115	1.113	-	0.2	20	87	0
Benzene	3.027	2.97	-	1.9	20	84	0
tert-Amyl methyl ether	1.521	1.483	-	2.5	20	87	0
1,2-Dichloroethane-d4	0.282	0.302	-	-7.1	20	101	0
1,2-Dichloroethane	0.858	0.909	-	-5.9	20	93	0
Trichloroethene	0.896	0.806	-	10	20	81	0
Dibromomethane	0.344	0.332	-	3.5	20	84	0
1,2-Dichloropropane	0.753	0.755	-	-0.3	20	87	0
Bromodichloromethane	0.987	0.971	-	1.6	20	86	0
1,4-Dioxane	0.00307	0.00238*	-	22.5*	20	70	0
cis-1,3-Dichloropropene	1.059	1.102	-	-4.1	20	92	0
Chlorobenzene-d5	1	1	-	0	20	74	0
Toluene-d8	1.077	1.167	-	-8.4	20	82	0
Toluene	1.629	1.848	-	-13.4	20	80	0
4-Methyl-2-pentanone	10	10.732	-	-7.3	20	92	0
Tetrachloroethene	0.709	0.719	-	-1.4	20	73	0
trans-1,3-Dichloropropene	0.736	0.899	-	-22.1*	20	90	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117869
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/20/21 04:39
Lab File ID	: VQ210420A02	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1488309-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.325	0.379	-	-16.6	20	85	0
Chlorodibromomethane	0.512	0.555	-	-8.4	20	80	0
1,3-Dichloropropane	0.692	0.819	-	-18.4	20	87	0
1,2-Dibromoethane	0.368	0.4	-	-8.7	20	81	0
2-Hexanone	10	11.022	-	-10.2	20	94	0
Chlorobenzene	1.757	1.926	-	-9.6	20	78	0
Ethylbenzene	3.145	3.717	-	-18.2	20	80	0
1,1,1,2-Tetrachloroethane	0.626	0.689	-	-10.1	20	80	0
p/m Xylene	20	20.098	-	-0.5	20	75	0
o Xylene	20	20.605	-	-3	20	77	0
Styrene	20	20.926	-	-4.6	20	78	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	69	0
Bromoform	0.517	0.621	-	-20.1*	20	79	0
Isopropylbenzene	6.172	7.657	-	-24.1*	20	77	0
4-Bromofluorobenzene	0.997	1.1	-	-10.3	20	75	0
Bromobenzene	1.257	1.481	-	-17.8	20	76	0
n-Propylbenzene	6.845	8.331	-	-21.7*	20	78	0
1,1,2,2-Tetrachloroethane	0.764	1.022	-	-33.8*	20	87	0
2-Chlorotoluene	4.764	5.914	-	-24.1*	20	80	0
1,3,5-Trimethylbenzene	3.876	4.521	-	-16.6	20	77	0
1,2,3-Trichloropropane	0.635	0.889	-	-40*	20	91	0
4-Chlorotoluene	4.01	4.898	-	-22.1*	20	80	0
tert-Butylbenzene	4.263	4.834	-	-13.4	20	73	0
1,2,4-Trimethylbenzene	3.462	4.141	-	-19.6	20	79	0
sec-Butylbenzene	5.424	6.402	-	-18	20	76	0
p-Isopropyltoluene	10	10.183	-	-1.8	20	74	0
1,3-Dichlorobenzene	2.441	2.858	-	-17.1	20	76	0
1,4-Dichlorobenzene	2.306	2.626	-	-13.9	20	76	0
n-Butylbenzene	10	11.656	-	-16.6	20	83	0
1,2-Dichlorobenzene	2.108	2.464	-	-16.9	20	76	0
1,2-Dibromo-3-chloropropan	0.11	0.121	-	-10	20	72	0
Hexachlorobutadiene	0.787	0.792	-	-0.6	20	69	0
1,2,4-Trichlorobenzene	0.939	1.029	-	-9.6	20	77	0
Naphthalene	1.416	1.627	-	-14.9	20	75	0
1,2,3-Trichlorobenzene	0.783	0.927	-	-18.4	20	76	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117869
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/20/21 16:08
Lab File ID	: VQ210420N01	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1488695-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	88	0
Dichlorodifluoromethane	0.715	0.719	-	-0.6	20	82	0
Chloromethane	1.089	1.139	-	-4.6	20	87	0
Vinyl chloride	0.844	0.838	-	0.7	20	81	0
Bromomethane	0.461	0.411	-	10.8	20	75	0
Chloroethane	0.521	0.499	-	4.2	20	79	0
Trichlorofluoromethane	1.198	1.09	-	9	20	75	0
Ethyl ether	0.275	0.246	-	10.5	20	76	0
1,1-Dichloroethene	0.654	0.537	-	17.9	20	69	0
Carbon disulfide	1.842	1.603	-	13	20	73	0
Methylene chloride	0.709	0.68	-	4.1	20	80	0
Acetone	10	11.903	-	-19	20	105	0
trans-1,2-Dichloroethene	0.781	0.678	-	13.2	20	73	0
Methyl tert-butyl ether	1.417	1.428	-	-0.8	20	88	0
Diisopropyl ether	2.883	3.079	-	-6.8	20	92	0
1,1-Dichloroethane	1.547	1.507	-	2.6	20	81	0
Ethyl tert-butyl ether	2.062	2.135	-	-3.5	20	89	0
cis-1,2-Dichloroethene	0.828	0.746	-	9.9	20	76	0
2,2-Dichloropropane	1.253	1.282	-	-2.3	20	86	0
Bromochloromethane	0.339	0.308	-	9.1	20	76	0
Chloroform	1.426	1.36	-	4.6	20	80	0
Carbon tetrachloride	1.277	1.163	-	8.9	20	75	0
Tetrahydrofuran	0.171	0.165	-	3.5	20	85	0
Dibromofluoromethane	0.291	0.275	-	5.5	20	82	0
1,1,1-Trichloroethane	1.461	1.329	-	9	20	76	0
2-Butanone	0.19	0.231	-	-21.6*	20	102	0
1,1-Dichloropropene	1.115	1.023	-	8.3	20	77	0
Benzene	3.027	2.853	-	5.7	20	78	0
tert-Amyl methyl ether	1.521	1.518	-	0.2	20	86	0
1,2-Dichloroethane-d4	0.282	0.311	-	-10.3	20	101	0
1,2-Dichloroethane	0.858	0.931	-	-8.5	20	92	0
Trichloroethene	0.896	0.777	-	13.3	20	75	0
Dibromomethane	0.344	0.347	-	-0.9	20	84	0
1,2-Dichloropropane	0.753	0.754	-	-0.1	20	84	0
Bromodichloromethane	0.987	0.967	-	2	20	83	0
1,4-Dioxane	0.00307	0.0028*	-	8.8	20	79	0
cis-1,3-Dichloropropene	1.059	1.112	-	-5	20	90	0
Chlorobenzene-d5	1	1	-	0	20	74	0
Toluene-d8	1.077	1.152	-	-7	20	80	0
Toluene	1.629	1.764	-	-8.3	20	76	0
4-Methyl-2-pentanone	10	10.58	-	-5.8	20	89	0
Tetrachloroethene	0.709	0.656	-	7.5	20	65	0
trans-1,3-Dichloropropene	0.736	0.894	-	-21.5*	20	89	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2117869
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/20/21 16:08
Lab File ID	: VQ210420N01	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1488695-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.325	0.381	-	-17.2	20	84	0
Chlorodibromomethane	0.512	0.551	-	-7.6	20	78	0
1,3-Dichloropropane	0.692	0.823	-	-18.9	20	87	0
1,2-Dibromoethane	0.368	0.412	-	-12	20	82	-.01
2-Hexanone	10	11.62	-	-16.2	20	99	0
Chlorobenzene	1.757	1.827	-	-4	20	73	0
Ethylbenzene	3.145	3.499	-	-11.3	20	75	0
1,1,1,2-Tetrachloroethane	0.626	0.665	-	-6.2	20	76	0
p/m Xylene	20	19.078	-	4.6	20	70	-.01
o Xylene	20	19.538	-	2.3	20	72	0
Styrene	20	20.167	-	-0.8	20	74	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	69	0
Bromoform	0.517	0.611	-	-18.2	20	78	0
Isopropylbenzene	6.172	6.94	-	-12.4	20	70	0
4-Bromofluorobenzene	0.997	1.095	-	-9.8	20	75	0
Bromobenzene	1.257	1.416	-	-12.6	20	73	0
n-Propylbenzene	6.845	7.618	-	-11.3	20	72	0
1,1,2,2-Tetrachloroethane	0.764	1.022	-	-33.8*	20	87	0
2-Chlorotoluene	4.764	5.106	-	-7.2	20	70	0
1,3,5-Trimethylbenzene	3.876	4.147	-	-7	20	71	0
1,2,3-Trichloropropane	0.635	0.889	-	-40*	20	92	0
4-Chlorotoluene	4.01	4.624	-	-15.3	20	76	0
tert-Butylbenzene	4.263	4.349	-	-2	20	66	0
1,2,4-Trimethylbenzene	3.462	3.862	-	-11.6	20	74	0
sec-Butylbenzene	5.424	5.682	-	-4.8	20	68	0
p-Isopropyltoluene	10	9.136	-	8.6	20	66	0
1,3-Dichlorobenzene	2.441	2.685	-	-10	20	72	0
1,4-Dichlorobenzene	2.306	2.498	-	-8.3	20	72	0
n-Butylbenzene	10	10.179	-	-1.8	20	73	0
1,2-Dichlorobenzene	2.108	2.348	-	-11.4	20	73	0
1,2-Dibromo-3-chloropropan	0.11	0.124	-	-12.7	20	74	0
Hexachlorobutadiene	0.787	0.678	-	13.9	20	60	0
1,2,4-Trichlorobenzene	0.939	0.962	-	-2.4	20	72	0
Naphthalene	1.416	1.619	-	-14.3	20	75	0
1,2,3-Trichlorobenzene	0.783	0.886	-	-13.2	20	73	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L2118225
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	3252H
Report Date:	04/26/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2118225-01	SW-1-04082021	WATER	CONCORD, MA	04/08/21 17:30	04/09/21
L2118225-02	TRIP BLANK1-04092021	WATER	CONCORD, MA	03/30/21 00:00	04/09/21
L2118225-03	PT-11P-04092021	WATER	CONCORD, MA	04/09/21 09:30	04/09/21
L2118225-04	GZW-7S-04092021	WATER	CONCORD, MA	04/09/21 09:45	04/09/21
L2118225-05	MW-S40-04092021	WATER	CONCORD, MA	04/09/21 10:00	04/09/21
L2118225-06	HA20-CMT-2I-04092021	WATER	CONCORD, MA	04/09/21 10:00	04/09/21
L2118225-07	MW-S18-04092021	WATER	CONCORD, MA	04/09/21 10:00	04/09/21
L2118225-08	MW-S04-04092021	WATER	CONCORD, MA	04/09/21 10:30	04/09/21
L2118225-09	EW-1-04092021	WATER	CONCORD, MA	04/09/21 10:35	04/09/21
L2118225-10	MW-S20-04092021	WATER	CONCORD, MA	04/09/21 11:50	04/09/21
L2118225-11	MW-SD38-04092021	WATER	CONCORD, MA	04/09/21 10:15	04/09/21
L2118225-12	GZW-7-1-04092021	WATER	CONCORD, MA	04/09/21 12:00	04/09/21
L2118225-13	MW-BS38-04092021	WATER	CONCORD, MA	04/09/21 12:55	04/09/21
L2118225-14	MW-BS40-04092021	WATER	CONCORD, MA	04/09/21 13:00	04/09/21
L2118225-15	FIELD BLANK1-04092021	WATER	CONCORD, MA	04/09/21 14:20	04/09/21
L2118225-16	EQ BLANK1-04092021	WATER	CONCORD, MA	04/09/21 14:30	04/09/21
L2118225-17	MW-BS04-04092021	WATER	CONCORD, MA	04/09/21 13:20	04/09/21
L2118225-18	MW-SD40-04092021	WATER	CONCORD, MA	04/09/21 14:40	04/09/21
L2118225-19	MW-2-04092021	WATER	CONCORD, MA	04/09/21 14:15	04/09/21
L2118225-20	MW-2-04092021DUP	WATER	CONCORD, MA	04/09/21 14:25	04/09/21
L2118225-21	MW-SD41-04092021	WATER	CONCORD, MA	04/09/21 13:20	04/09/21
L2118225-22	ML-3-3-04092021	WATER	CONCORD, MA	04/09/21 15:00	04/09/21
L2118225-23	GZW-8-2-04092021	WATER	CONCORD, MA	04/09/21 16:00	04/09/21
L2118225-24	MW-S23-04092021	WATER	CONCORD, MA	04/09/21 15:55	04/09/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2118225-25	HA20-CMT-3S-04092021	WATER	CONCORD, MA	04/09/21 14:40	04/09/21
L2118225-26	MW-SD35-04092021	WATER	CONCORD, MA	04/09/21 15:40	04/09/21
L2118225-27	MW-BS35-04092021	WATER	CONCORD, MA	04/09/21 13:15	04/09/21

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Sample Receipt

L2118225-05: One of the containers submitted for 1,4 Dioxane via 8270D-SIM was received damaged; however, there was adequate sample remaining to perform the requested analysis.

L2118225-09: The analysis of Perfluorinated Alkyl Acids was performed at the client's request.

L2118225-12: Sample containers for Perfluorinated Alkyl Acids were received for the "GZW-7-1-04092021" sample, but were not listed on the chain of custody. At the client's request, the analysis was performed.

Volatile Organics

L2118225-23: Initial calibration utilized a quadratic fit for: n-butylbenzene, p-isopropyltoluene

In reference to question H:

L2118225-22: The surrogate recovery is above the acceptance criteria for dibromofluoromethane (131%). Since the sample was non-detect for all target analytes, re-analysis was not required.

The WG1487778-3 LCS recovery, associated with L2118225-02, is above the individual acceptance criteria for acetone (140%), but within the overall method allowances. The results of the associated sample are reported; however, all positive detects are considered to have a potentially high bias for this compound.

The WG1489380-3 LCS recovery, associated with L2118225-01, -04, -06, -08, -09, -11, -13, -16, -17, -20, -22, -24, and -27, is above the individual acceptance criteria for 1,4-dioxane (136%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for this compound.

The WG1489718-6 MS recoveries, performed on L2118225-05, are outside the acceptance criteria for carbon tetrachloride (140%) and trichlorofluoromethane (140%); however, the associated LCS/LCSD recoveries are within overall method allowances. No further action was required.

Case Narrative (continued)

L2118225-01, -04, -06, -08, -09, -11, -13, -16, -17, -20, -22, -24, and -27: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0098)
Average Response Factor: 1,4-dioxane
L2118225-02: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0095)
Average Response Factor: 1,4-dioxane
L2118225-03, -05, -07, -10, -12, -14, -18, -19, -21, -25, and -26: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0157)
Average Response Factor: 1,4-dioxane
L2118225-23: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0025)
Average Response Factor: 1,4-dioxane
L2118225-01 through -14 and -16 through -27: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

Semivolatile Organics
L2118225-01, -09, -22, -24 through -27, WG1486645-1, WG1487149-1, WG1486645-2/-3, and WG1487149-2/-3: The initial calibration utilized a quadratic fit for bis(2-ethylhexyl)phthalate, di-n-octylphthalate, and butyl benzyl phthalate.
L2118225-14, WG1487022-1, and WG1487022-2/-3: The initial calibration utilized a quadratic fit for benzo(ghi)perylene.
L2118225-14RE: The initial calibration utilized a quadratic fit for 2,4,6-tribromophenol, bis(2-ethylhexyl)phthalate, and indeno(1,2,3-cd)pyrene
In reference to question H:
L2118225-06, -07, -12, and -25: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (155%, 133%, 114%, and 130%, respectively), but within the overall method allowances.

Case Narrative (continued)

The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
L2118225-14: The surrogate recoveries were outside the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (6%), and 2,4,6-tribromophenol (0%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.
The WG1486645-2/-3 LCS/LCSD recoveries, associated with L2118225-01, are below the individual acceptance criteria for aniline (27%/27%), but within the overall method allowances. The results of the associated sample are reported; however, all results are considered to have a potentially low bias for this compound.
The WG1486645-2/-3 LCS/LCSD RPD, associated with L2118225-01 is above the acceptance criteria for 2,4-dimethylphenol (38%).
The WG1487022-2 LCS recovery, associated with L2118225-03 through -14 and -16 through -23, is below the acceptance criteria for aniline (27%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.
The WG1487022-2/-3 LCS/LCSD RPDs, associated with L2118225-03 through -14 and -16 through -23, are above the acceptance criteria for aniline (46%) and 2,4-dimethylphenol (41%).
The surrogate recoveries for the WG1487022-2/-3 LCS/LCSD, associated with L2118225-03 through -14 and -16 through -23, are outside the acceptance criteria for 2,4,6-tribromophenol (124%/118%). The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The WG1487149-2/-3 LCS/LCSD recoveries, associated with -24 through -27, are below the individual acceptance criteria for aniline (35%/18%) and 4-chloroaniline (LCSD 39%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.
The WG1487149-2/-3 LCS/LCSD RPDs, associated with L2118225-24 through -27, are above the acceptance criteria for aniline (64%), 4-chloroaniline (29%), 2,4-dimethylphenol (24%), and phenol (21%).

Case Narrative (continued)

The surrogate recoveries for the WG1487149-2/-3 LCS/LCSD, associated with L2118225-24 through -27, are outside the acceptance criteria for 2,4,6-tribromophenol (123%/115%). The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1489093-2 LCS recovery, associated with L2118225-14RE, is below the individual acceptance criteria for aniline (17%), but within the overall method allowances. The results of the associated sample are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1489093-2/-3 LCS/LCSD RPDs, associated with L2118225-14RE, are above the acceptance criteria for 3,3'-dichlorobenzidine (46%), benzo(a)pyrene (23%), benzo(k)fluoranthene (24%), benzo(ghi)perylene (32%), dibenzo(a,h)anthracene (27%), indeno(1,2,3-cd)pyrene (36%), aniline (97%), and 4-chloroaniline (41%).

The surrogate recoveries for the WG1489093-2/-3, associated with L2118225-14RE, are outside the individual acceptance criteria for 2,4,6-tribromophenol (123%/135%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1487022-4/-5 MS/MSD recoveries, performed on L2118225-05, are outside the acceptance criteria for aniline (28%/14%), 4-chloroaniline (MSD 25%), and 2,4-dimethylphenol (MSD 29%).

The WG1487022-4/-5 MS/MSD RPDs, performed on L2118225-05, are outside the acceptance criteria for 1,2,4-trichlorobenzene (33%), 1,2-dichlorobenzene (26%), 1,3-dichlorobenzene (30%), 1,4-dichlorobenzene (35%), 3,3'-dichlorobenzidine (27%), 2,6-dinitrotoluene (22%), isophorone (27%), bis(2-ethylhexyl)phthalate (21%), di-n-octylphthalate (29%), aniline (68%), 4-chloroaniline (65%), 2,4,6-trichlorophenol (25%), 2-chlorophenol (26%), 2,4-dichlorophenol (22%), 2,4-dimethylphenol (72%), 2-nitrophenol (29%), 2-methylphenol (22%), 3-methylphenol/4-methylphenol (26%), and 2,4,5-trichlorophenol (21%).

Semivolatile Organics by SIM

L2118225-01, -03 through -14, -14RE, -16 through -27, WG1486647-1, WG1487027-1, WG1487152-1, WG1489095-1, WG1486647-2/-3, WG1487027-2/-3, WG1487152-2/-3, WG1489095-2/-3, and WG1487027-4/-5: The initial calibration utilized a quadratic fit for pentachlorophenol.

Case Narrative (continued)

In reference to question H:

L2118225-06, -07, -12, and -25: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (146%, 125%, 119%, and 128%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

L2118225-14: The surrogate recoveries were outside the acceptance criteria for 2-fluorophenol (1%), phenol-d6 (7%), and 2,4,6-tribromophenol (4%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

L2118225-21: The surrogate recovery is outside the individual acceptance criteria for 4-terphenyl-d14 (141%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The surrogate recovery for the WG1486647-2 LCS, associated with L2118225-01, is outside the acceptance criteria for 2,4,6-tribromophenol (112%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.

The surrogate recovery for the WG1487027-3 LCSD, associated with L2118225-03 through -14 and -16 through -23, is outside the acceptance criteria for 2,4,6-tribromophenol (112%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.

The WG1487152-2/-3 LCS/LCSD RPDs, associated with -24 through -27, are above the acceptance criteria for 2-chloronaphthalene (30%), fluoranthene (23%), hexachlorobutadiene (29%), acenaphthylene (22%), fluorene (56%), indeno(1,2,3-cd)pyrene (21%), and hexachlorobenzene (22%).

The surrogate recoveries for the WG1487152-2/-3 LCS/LCSD, associated with -24 through -27, are outside the acceptance criteria for 2,4,6-tribromophenol (LCS 131%) and 4-terphenyl-d14 (138%/131%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.

The WG1487027-4/-5 MS/MSD RPDs, performed on L2118225-05, are outside the acceptance criteria for 2-chloronaphthalene (21%), hexachlorobutadiene (37%), naphthalene (24%), 2-methylnaphthalene (29%), and hexachloroethane (43%).

Case Narrative (continued)

Non-MCP Related Narratives

Perfluorinated Alkyl Acids by Isotope Dilution

L2118225-09, -12, -15, and -16: The MeOH fraction of the extraction is reported for the following compounds: Perfluorooctanesulfonamide (FOSA), N-Methyl Perfluorooctane Sulfonamide (NMeFOSA), N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA), N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE), and N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).

L2118225-12: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

L2118225-15: The surrogate recoveries were outside the acceptance criteria (less than 10%) for n-methyl-d3-perfluoro-1-octanesulfonamide (d3-nmefosa) (1%) and n-ethyl-d5-perfluoro-1-octanesulfonamide (d5-netfosa) (1%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

L2118225-16RE: The sample was re-extracted within holding time due to QC failures for the MEOH fraction in the original extraction. The results of the re-extraction are reported.

WG1485193-1: The surrogate recoveries were outside the acceptance criteria (less than 10%) for n-methyl-d3-perfluoro-1-octanesulfonamide (d3-nmefosa) (2%) and n-ethyl-d5-perfluoro-1-octanesulfonamide (d5-netfosa) (1%).

The WG1485193-2 LCS recovery, associated with L2118225-15 and -16, is above the acceptance criteria for 1h,1h,2h,2h-perfluorododecanesulfonic acid (10:2fts) (190%); however, the associated sample is non-detect to the RL for this target analyte. The results of the original analysis are reported.

The surrogate recoveries for the WG1485193-2 LCS, associated with L2118225-15 and -16, were outside the acceptance criteria (less than 10%) for n-methyl-d3-perfluoro-1-octanesulfonamide (d3-nmefosa) (2%) and n-ethyl-d5-perfluoro-1-octanesulfonamide (d5-netfosa) (2%).

Dissolved Organic Carbon

The samples were field filtered; a filter blank was not received.

Case Narrative (continued)

Nitrogen, Nitrite

The WG1484627-4 MS recovery, performed on L2118225-05, is outside the acceptance criteria for nitrogen, nitrite (135%); however, the associated LCS recovery is within criteria. No further action was taken.

The WG1484631-4 MS recovery, performed on L2118225-12, is outside the acceptance criteria for nitrogen, nitrite (142%); however, the associated LCS recovery is within criteria. No further action was taken.

The WG1484633-4 MS recovery, performed on L2118225-26, is outside the acceptance criteria for nitrogen, nitrite (130%); however, the associated LCS recovery is within criteria. No further action was taken.

Nitrogen, Nitrate

The WG1484632-4 MS recovery, performed on L2118225-26, is outside the acceptance criteria for nitrogen, nitrate (82%); however, the associated LCS recovery is within criteria. No further action was taken.

Anions by Ion Chromatography

The WG1486375-3 MS recovery, performed on L2118225-19, is outside the acceptance criteria for chloride (84%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 04/26/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	ML-3-3-04092021	L2118225-22	Dibromofluoromethane	Surrogate	131	70-130	-	potential high bias
8260C	Batch QC	WG1487778-3	Acetone	LCS	140	70-130	02	potential high bias
8260C	Batch QC	WG1489380-3	1,4-Dioxane	LCS	136	70-130	01,04,06,08-09,11,13,16-17,20,22,24,27	potential high bias
8260C	Batch QC (L2118225-05)	WG1489718-6	Carbon tetrachloride	MS	140	70-130	03,05,07,10,12,14,18-19,21,25-26	potential high bias
8260C	Batch QC (L2118225-05)	WG1489718-6	Trichlorofluoromethane	MS	140	70-130	03,05,07,10,12,14,18-19,21,25-26	potential high bias
MCP Semivolatile Organics - Westborough Lab								
8270D	HA20-CMT-2I-04092021	L2118225-06	2,4,6-Tribromophenol	Surrogate	155	15-110	-	potential high bias
8270D	MW-S18-04092021	L2118225-07	2,4,6-Tribromophenol	Surrogate	133	15-110	-	potential high bias
8270D	GZW-7-1-04092021	L2118225-12	2,4,6-Tribromophenol	Surrogate	114	15-110	-	potential high bias
8270D	MW-BS40-04092021	L2118225-14	2-Fluorophenol	Surrogate	0	15-110	-	potential low bias
8270D	MW-BS40-04092021	L2118225-14	Phenol-d6	Surrogate	6	15-110	-	potential low bias
8270D	MW-BS40-04092021	L2118225-14	2,4,6-Tribromophenol	Surrogate	0	15-110	-	potential low bias
8270D	HA20-CMT-3S-04092021	L2118225-25	2,4,6-Tribromophenol	Surrogate	130	15-110	-	potential high bias
8270D	Batch QC	WG1486645-2	Aniline	LCS	27	40-140	01	potential low bias
8270D	Batch QC	WG1486645-3	Aniline	LCSD	27	40-140	01	potential low bias
8270D	Batch QC	WG1486645-3	2,4-Dimethylphenol	LCSD	38	20	01	non-directional bias
8270D	Batch QC	WG1487022-2	Aniline	LCS	27	40-140	03-14,16-23	potential low bias
8270D	Batch QC	WG1487022-2	2,4,6-Tribromophenol	Surrogate	124	15-110	-	potential high bias
8270D	Batch QC	WG1487022-3	Aniline	LCSD	46	20	03-14,16-23	non-directional bias
8270D	Batch QC	WG1487022-3	2,4-Dimethylphenol	LCSD	41	20	03-14,16-23	non-directional bias
8270D	Batch QC	WG1487022-3	2,4,6-Tribromophenol	Surrogate	118	15-110	-	potential high bias
8270D	Batch QC (L2118225-05)	WG1487022-4	Aniline	MS	28	40-140	03-14,16-	potential low bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS　　**Lab Number:** L2118225

Project Number: 3252H　　**Report Date:** 04/26/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
							23	
8270D	Batch QC (L2118225-05)	WG1487022-5	1,2,4-Trichlorobenzene	MSD	33	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	1,2-Dichlorobenzene	MSD	26	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	1,3-Dichlorobenzene	MSD	30	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	1,4-Dichlorobenzene	MSD	35	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	3,3'-Dichlorobenzidine	MSD	27	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	2,6-Dinitrotoluene	MSD	22	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	Isophorone	MSD	27	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	Bis(2-ethylhexyl)phthalate	MSD	21	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	Di-n-octylphthalate	MSD	29	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	Aniline	MSD	14	40-140	03-14,16-23	potential low bias
8270D	Batch QC (L2118225-05)	WG1487022-5	Aniline	MSD	68	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	4-Chloroaniline	MSD	25	40-140	03-14,16-23	potential low bias
8270D	Batch QC (L2118225-05)	WG1487022-5	4-Chloroaniline	MSD	65	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	2,4,6-Trichlorophenol	MSD	25	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	2-Chlorophenol	MSD	26	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	2,4-Dichlorophenol	MSD	22	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	2,4-Dimethylphenol	MSD	29	30-130	03-14,16-23	potential low bias
8270D	Batch QC (L2118225-05)	WG1487022-5	2,4-Dimethylphenol	MSD	72	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	2-Nitrophenol	MSD	29	20	03-14,16-23	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC (L2118225-05)	WG1487022-5	2-Methylphenol	MSD	22	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	3-Methylphenol/4-Methylphenol	MSD	26	20	03-14,16-23	non-directional bias
8270D	Batch QC (L2118225-05)	WG1487022-5	2,4,5-Trichlorophenol	MSD	21	20	03-14,16-23	non-directional bias
8270D	Batch QC	WG1487149-2	Aniline	LCS	35	40-140	24-27	potential low bias
8270D	Batch QC	WG1487149-2	2,4,6-Tribromophenol	Surrogate	123	15-110	-	potential high bias
8270D	Batch QC	WG1487149-3	Aniline	LCSD	18	40-140	24-27	potential low bias
8270D	Batch QC	WG1487149-3	Aniline	LCSD	64	20	24-27	non-directional bias
8270D	Batch QC	WG1487149-3	4-Chloroaniline	LCSD	29	20	24-27	non-directional bias
8270D	Batch QC	WG1487149-3	4-Chloroaniline	LCSD	39	40-140	24-27	potential low bias
8270D	Batch QC	WG1487149-3	2,4-Dimethylphenol	LCSD	24	20	24-27	non-directional bias
8270D	Batch QC	WG1487149-3	Phenol	LCSD	21	20	24-27	non-directional bias
8270D	Batch QC	WG1487149-3	2,4,6-Tribromophenol	Surrogate	115	15-110	-	potential high bias
8270D	Batch QC	WG1489093-2	Aniline	LCS	17	40-140	14	potential low bias
8270D	Batch QC	WG1489093-2	2,4,6-Tribromophenol	Surrogate	123	15-110	-	potential high bias
8270D	Batch QC	WG1489093-3	3,3'-Dichlorobenzidine	LCSD	46	20	14	non-directional bias
8270D	Batch QC	WG1489093-3	Benzo(a)pyrene	LCSD	23	20	14	non-directional bias
8270D	Batch QC	WG1489093-3	Benzo(k)fluoranthene	LCSD	24	20	14	non-directional bias
8270D	Batch QC	WG1489093-3	Benzo(ghi)perylene	LCSD	32	20	14	non-directional bias
8270D	Batch QC	WG1489093-3	Dibenzo(a,h)anthracene	LCSD	27	20	14	non-directional bias
8270D	Batch QC	WG1489093-3	Indeno(1,2,3-cd)pyrene	LCSD	36	20	14	non-directional bias
8270D	Batch QC	WG1489093-3	Aniline	LCSD	97	20	14	non-directional bias
8270D	Batch QC	WG1489093-3	4-Chloroaniline	LCSD	41	20	14	non-directional bias
8270D	Batch QC	WG1489093-3	2,4,6-Tribromophenol	Surrogate	135	15-110	-	potential high bias
MCP Semivolatile Organics by SIM - Westborough Lab								
8270D-SIM	HA20-CMT-2I-04092021	L2118225-06	2,4,6-Tribromophenol	Surrogate	146	15-110	-	potential high bias
8270D-SIM	MW-S18-04092021	L2118225-07	2,4,6-Tribromophenol	Surrogate	125	15-110	-	potential high bias
8270D-SIM	GZW-7-1-04092021	L2118225-12	2,4,6-Tribromophenol	Surrogate	119	15-110	-	potential high bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118225

Report Date: 04/26/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D-SIM	MW-BS40-04092021	L2118225-14	2-Fluorophenol	Surrogate	1	15-110	-	potential low bias
8270D-SIM	MW-BS40-04092021	L2118225-14	Phenol-d6	Surrogate	7	15-110	-	potential low bias
8270D-SIM	MW-BS40-04092021	L2118225-14	2,4,6-Tribromophenol	Surrogate	4	15-110	-	potential low bias
8270D-SIM	MW-SD41-04092021	L2118225-21	4-Terphenyl-d14	Surrogate	141	30-130	-	potential high bias
8270D-SIM	HA20-CMT-3S-04092021	L2118225-25	2,4,6-Tribromophenol	Surrogate	128	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1486647-2	2,4,6-Tribromophenol	Surrogate	112	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1487027-3	2,4,6-Tribromophenol	Surrogate	112	15-110	-	potential high bias
8270D-SIM	Batch QC (L2118225-05)	WG1487027-5	2-Chloronaphthalene	MSD	21	20	03-14,16-23	non-directional bias
8270D-SIM	Batch QC (L2118225-05)	WG1487027-5	Hexachlorobutadiene	MSD	37	20	03-14,16-23	non-directional bias
8270D-SIM	Batch QC (L2118225-05)	WG1487027-5	Naphthalene	MSD	24	20	03-14,16-23	non-directional bias
8270D-SIM	Batch QC (L2118225-05)	WG1487027-5	2-Methylnaphthalene	MSD	29	20	03-14,16-23	non-directional bias
8270D-SIM	Batch QC (L2118225-05)	WG1487027-5	Hexachloroethane	MSD	43	20	03-14,16-23	non-directional bias
8270D-SIM	Batch QC	WG1487152-2	2,4,6-Tribromophenol	Surrogate	131	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1487152-2	4-Terphenyl-d14	Surrogate	138	30-130	-	potential high bias
8270D-SIM	Batch QC	WG1487152-3	2-Chloronaphthalene	LCSD	30	20	24-27	non-directional bias
8270D-SIM	Batch QC	WG1487152-3	Fluoranthene	LCSD	23	20	24-27	non-directional bias
8270D-SIM	Batch QC	WG1487152-3	Hexachlorobutadiene	LCSD	29	20	24-27	non-directional bias
8270D-SIM	Batch QC	WG1487152-3	Acenaphthylene	LCSD	22	20	24-27	non-directional bias
8270D-SIM	Batch QC	WG1487152-3	Fluorene	LCSD	56	20	24-27	non-directional bias
8270D-SIM	Batch QC	WG1487152-3	Indeno(1,2,3-cd)pyrene	LCSD	21	20	24-27	non-directional bias
8270D-SIM	Batch QC	WG1487152-3	Hexachlorobenzene	LCSD	22	20	24-27	non-directional bias
8270D-SIM	Batch QC	WG1487152-3	4-Terphenyl-d14	Surrogate	131	30-130	-	potential high bias
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab								
LCMSMS-ID	Batch QC	WG1485193-2	1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	LCS	190	81-188	15-16	potential high bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2118225-19)	WG1486375-3	Chloride	MS	84	90-110	04,06,11-12,16,19	potential low bias
General Chemistry - Westborough Lab								
353.2	Batch QC (L2118225-05)	WG1484627-4	Nitrogen, Nitrite	MS	135	80-120	01,03-11	potential high bias
353.2	Batch QC (L2118225-12)	WG1484631-4	Nitrogen, Nitrite	MS	142	80-120	12-14,16-22	potential high bias
353.2	Batch QC (L2118225-26)	WG1484632-4	Nitrogen, Nitrate	MS	82	83-113	23-27	potential low bias
353.2	Batch QC (L2118225-26)	WG1484633-4	Nitrogen, Nitrite	MS	130	80-120	23-27	potential high bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-01
Client ID: SW-1-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 17:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 07:40
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.29	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.79	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-01	Date Collected:	04/08/21 17:30
Client ID:	SW-1-04082021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-01
Client ID: SW-1-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 17:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	109		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-02
Client ID: TRIP BLANK1-04092021
Sample Location: CONCORD, MA

Date Collected: 03/30/21 00:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 07:24
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-02	Date Collected:	03/30/21 00:00
Client ID:	TRIP BLANK1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-02	Date Collected:	03/30/21 00:00
Client ID:	TRIP BLANK1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	128		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	130		70-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-03
Date Collected: 04/09/21 09:30
Client ID: PT-11P-04092021
Date Received: 04/09/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 08:00
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	0.19	J	ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-03 Date Collected: 04/09/21 09:30
Client ID: PT-11P-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.65	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-03	Date Collected:	04/09/21 09:30
Client ID:	PT-11P-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	113		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-04
Client ID: GZW-7S-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 09:45
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 08:21
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.1		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-04 | Date Collected: 04/09/21 09:45
Client ID: GZW-7S-04092021 | Date Received: 04/09/21
Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-04	Date Collected:	04/09/21 09:45
Client ID:	GZW-7S-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	114		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-05
Client ID: MW-S40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 06:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-05 Date Collected: 04/09/21 10:00
Client ID: MW-S40-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-05	Date Collected:	04/09/21 10:00
Client ID:	MW-S40-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	108		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-06	Date Collected:	04/09/21 10:00
Client ID:	HA20-CMT-2I-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 06:58
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	0.84	J	ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.28	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.63	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	0.54	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	0.33	J	ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-06
Client ID: HA20-CMT-2I-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.22	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	12		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	2.0	J	ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-06
Client ID: HA20-CMT-2I-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	111		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-07
Client ID: MW-S18-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 08:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-07 Date Collected: 04/09/21 10:00

Client ID: MW-S18-04092021 Date Received: 04/09/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-07 Date Collected: 04/09/21 10:00

Client ID: MW-S18-04092021 Date Received: 04/09/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	108		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-08
Client ID: MW-S04-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 11:47
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-08 Date Collected: 04/09/21 10:30
Client ID: MW-S04-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-08	Date Collected:	04/09/21 10:30
Client ID:	MW-S04-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	114		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-09
Client ID: EW-1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:35
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 09:02
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	0.09	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.67	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-09 Date Collected: 04/09/21 10:35

Client ID: EW-1-04092021 Date Received: 04/09/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.6		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	0.20	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.61	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.61	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-09 Date Collected: 04/09/21 10:35

Client ID: EW-1-04092021 Date Received: 04/09/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	126		70-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-10
Client ID: MW-S20-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 11:50
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 09:23
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-10
Client ID: MW-S20-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 11:50
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.2		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.2		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-10 Date Collected: 04/09/21 11:50

Client ID: MW-S20-04092021 Date Received: 04/09/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	111		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-11
Client ID: MW-SD38-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 09:43
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	0.10	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.89	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-11
Client ID: MW-SD38-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-11	Date Collected:	04/09/21 10:15
Client ID:	MW-SD38-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	117		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-12
Client ID: GZW-7-1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 12:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 10:04
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.6		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-12 Date Collected: 04/09/21 12:00
Client ID: GZW-7-1-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-12 Date Collected: 04/09/21 12:00
Client ID: GZW-7-1-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	125		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-13	Date Collected:	04/09/21 12:55
Client ID:	MW-BS38-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 10:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-13	Date Collected:	04/09/21 12:55
Client ID:	MW-BS38-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-13 Date Collected: 04/09/21 12:55
Client ID: MW-BS38-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	117		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 10:45
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14 Date Collected: 04/09/21 13:00
Client ID: MW-BS40-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	111		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-16 Date Collected: 04/09/21 14:30
Client ID: EQ BLANK1-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 06:16
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-16 Date Collected: 04/09/21 14:30
Client ID: EQ BLANK1-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	2.3		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-16	Date Collected:	04/09/21 14:30
Client ID:	EQ BLANK1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	118		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-17	Date Collected:	04/09/21 13:20
Client ID:	MW-BS04-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 11:06
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-17 Date Collected: 04/09/21 13:20
Client ID: MW-BS04-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.23	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	2.8		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	2.8		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-17	Date Collected:	04/09/21 13:20
Client ID:	MW-BS04-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	120		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-18	Date Collected:	04/09/21 14:40
Client ID:	MW-SD40-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 11:26
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.50	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.36	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-18 Date Collected: 04/09/21 14:40
Client ID: MW-SD40-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	4.9		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.1		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.1		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-18 Date Collected: 04/09/21 14:40
Client ID: MW-SD40-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	117		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-19
Client ID: MW-2-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 12:07
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.20	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-19 Date Collected: 04/09/21 14:15
Client ID: MW-2-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-19	Date Collected:	04/09/21 14:15
Client ID:	MW-2-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	122		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-20
Client ID: MW-2-04092021DUP
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:25
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 12:28
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.22	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-20 Date Collected: 04/09/21 14:25
Client ID: MW-2-04092021DUP Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-20	Date Collected:	04/09/21 14:25
Client ID:	MW-2-04092021DUP	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	120		70-130

Project Name: NUCLEAR METALS　　**Lab Number:** L2118225
Project Number: 3252H　　**Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-21　　Date Collected: 04/09/21 13:20
Client ID: MW-SD41-04092021　　Date Received: 04/09/21
Sample Location: CONCORD, MA　　Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 12:48
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	0.21	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.60	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-21 Date Collected: 04/09/21 13:20
Client ID: MW-SD41-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-21	Date Collected:	04/09/21 13:20
Client ID:	MW-SD41-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	127		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-22
Client ID: ML-3-3-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 13:09
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-22	Date Collected:	04/09/21 15:00
Client ID:	ML-3-3-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-22	Date Collected:	04/09/21 15:00
Client ID:	ML-3-3-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	**131**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-23
Client ID: GZW-8-2-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 16:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 11:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-23 Date Collected: 04/09/21 16:00
Client ID: GZW-8-2-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-23	Date Collected:	04/09/21 16:00
Client ID:	GZW-8-2-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	80		70-130
Dibromofluoromethane	113		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-24
Client ID: MW-S23-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:55
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 13:50
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-24	Date Collected:	04/09/21 15:55
Client ID:	MW-S23-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-24	Date Collected:	04/09/21 15:55
Client ID:	MW-S23-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	121		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-25
Client ID: HA20-CMT-3S-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 07:19
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.97	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-25	Date Collected:	04/09/21 14:40
Client ID:	HA20-CMT-3S-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-25
Client ID: HA20-CMT-3S-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	109		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-26
Client ID: MW-SD35-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:40
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 14:10
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-26 Date Collected: 04/09/21 15:40
Client ID: MW-SD35-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.52	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-26
Client ID: MW-SD35-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:40
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	125		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-27
Client ID: MW-BS35-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 13:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/22/21 14:31
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-27	Date Collected:	04/09/21 13:15
Client ID:	MW-BS35-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-27 Date Collected: 04/09/21 13:15

Client ID: MW-BS35-04092021 Date Received: 04/09/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	127		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG1487778-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG1487778-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG1487778-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	119		70-130

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/22/21 05:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01,04,06,08-09,11,13,16-17,20,22,24,27 Batch: WG1489380-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/22/21 05:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01,04,06,08-09,11,13,16-17,20,22,24,27 Batch: WG1489380-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/22/21 05:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01,04,06,08-09,11,13,16-17,20,22,24,27 Batch: WG1489380-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	110		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/22/21 05:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03,05,07,10,12,14,18-19,21,25-26 Batch: WG1489718-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/22/21 05:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03,05,07,10,12,14,18-19,21,25-26 Batch: WG1489718-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/22/21 05:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03,05,07,10,12,14,18-19,21,25-26 Batch: WG1489718-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	111		70-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/23/21 06:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 23 Batch: WG1489835-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/23/21 06:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 23 Batch: WG1489835-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/23/21 06:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 23 Batch: WG1489835-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	80		70-130
Dibromofluoromethane	104		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1487778-3 WG1487778-4								
Methylene chloride	120		120		70-130	0		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	110		100		70-130	10		20
1,1,2-Trichloroethane	120		110		70-130	9		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	110		100		70-130	10		20
Trichlorofluoromethane	110		110		70-130	0		20
1,2-Dichloroethane	120		120		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	120		110		70-130	9		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	92		94		70-130	2		20
1,1,2,2-Tetrachloroethane	110		110		70-130	0		20
Benzene	110		110		70-130	0		20
Toluene	110		100		70-130	10		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	130		120		70-130	8		20
Bromomethane	96		94		70-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1487778-3 WG1487778-4								
Vinyl chloride	110		110		70-130	0		20
Chloroethane	120		110		70-130	9		20
1,1-Dichloroethene	110		110		70-130	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	100		110		70-130	10		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	110		110		70-130	0		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	110		110		70-130	0		20
Styrene	115		110		70-130	4		20
Dichlorodifluoromethane	110		110		70-130	0		20
Acetone	**140**	Q	130		70-130	7		20
Carbon disulfide	120		110		70-130	9		20
Methyl ethyl ketone	120		120		70-130	0		20
Methyl isobutyl ketone	100		100		70-130	0		20
2-Hexanone	110		120		70-130	9		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	130		130		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1487778-3 WG1487778-4								
2,2-Dichloropropane	110		120		70-130	9		20
1,2-Dibromoethane	110		100		70-130	10		20
1,3-Dichloropropane	120		110		70-130	9		20
1,1,1,2-Tetrachloroethane	110		100		70-130	10		20
Bromobenzene	97		98		70-130	1		20
n-Butylbenzene	110		110		70-130	0		20
sec-Butylbenzene	100		110		70-130	10		20
tert-Butylbenzene	98		100		70-130	2		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	100		110		70-130	10		20
1,2-Dibromo-3-chloropropane	98		100		70-130	2		20
Hexachlorobutadiene	110		110		70-130	0		20
Isopropylbenzene	95		100		70-130	5		20
p-Isopropyltoluene	100		110		70-130	10		20
Naphthalene	96		96		70-130	0		20
n-Propylbenzene	100		110		70-130	10		20
1,2,3-Trichlorobenzene	100		99		70-130	1		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	100		110		70-130	10		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Diethyl ether	110		110		70-130	0		20
Diisopropyl Ether	120		120		70-130	0		20
Ethyl-Tert-Butyl-Ether	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1487778-3 WG1487778-4								
Tertiary-Amyl Methyl Ether	95		100		70-130	5		20
1,4-Dioxane	112		96		70-130	15		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		106		70-130
Toluene-d8	102		100		70-130
4-Bromofluorobenzene	86		92		70-130
Dibromofluoromethane	102		99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01,04,06,08-09,11,13,16-17,20,22,24,27 Batch: WG1489380-3 WG1489380-4								
Methylene chloride	93		99		70-130	6		20
1,1-Dichloroethane	90		97		70-130	7		20
Chloroform	90		95		70-130	5		20
Carbon tetrachloride	87		94		70-130	8		20
1,2-Dichloropropane	90		97		70-130	7		20
Dibromochloromethane	96		93		70-130	3		20
1,1,2-Trichloroethane	100		95		70-130	5		20
Tetrachloroethene	95		96		70-130	1		20
Chlorobenzene	94		95		70-130	1		20
Trichlorofluoromethane	92		100		70-130	8		20
1,2-Dichloroethane	92		98		70-130	6		20
1,1,1-Trichloroethane	90		96		70-130	6		20
Bromodichloromethane	89		96		70-130	8		20
trans-1,3-Dichloropropene	97		92		70-130	5		20
cis-1,3-Dichloropropene	94		98		70-130	4		20
1,1-Dichloropropene	92		100		70-130	8		20
Bromoform	95		89		70-130	7		20
1,1,2,2-Tetrachloroethane	98		94		70-130	4		20
Benzene	93		95		70-130	2		20
Toluene	93		94		70-130	1		20
Ethylbenzene	97		100		70-130	3		20
Chloromethane	92		97		70-130	5		20
Bromomethane	85		91		70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01,04,06,08-09,11,13,16-17,20,22,24,27 Batch: WG1489380-3 WG1489380-4								
Vinyl chloride	91		96		70-130	5		20
Chloroethane	94		99		70-130	5		20
1,1-Dichloroethene	86		99		70-130	14		20
trans-1,2-Dichloroethene	90		100		70-130	11		20
Trichloroethene	92		100		70-130	8		20
1,2-Dichlorobenzene	93		93		70-130	0		20
1,3-Dichlorobenzene	93		94		70-130	1		20
1,4-Dichlorobenzene	94		94		70-130	0		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	95		100		70-130	5		20
o-Xylene	95		100		70-130	5		20
cis-1,2-Dichloroethene	92		98		70-130	6		20
Dibromomethane	92		97		70-130	5		20
1,2,3-Trichloropropane	99		92		70-130	7		20
Styrene	90		95		70-130	5		20
Dichlorodifluoromethane	94		100		70-130	6		20
Acetone	120		110		70-130	9		20
Carbon disulfide	92		99		70-130	7		20
Methyl ethyl ketone	110		110		70-130	0		20
Methyl isobutyl ketone	100		95		70-130	5		20
2-Hexanone	100		100		70-130	0		20
Bromochloromethane	91		100		70-130	9		20
Tetrahydrofuran	120		120		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01,04,06,08-09,11,13,16-17,20,22,24,27 Batch: WG1489380-3 WG1489380-4								
2,2-Dichloropropane	93		99		70-130	6		20
1,2-Dibromoethane	100		98		70-130	2		20
1,3-Dichloropropane	100		96		70-130	4		20
1,1,1,2-Tetrachloroethane	95		94		70-130	1		20
Bromobenzene	91		94		70-130	3		20
n-Butylbenzene	99		96		70-130	3		20
sec-Butylbenzene	95		96		70-130	1		20
tert-Butylbenzene	93		96		70-130	3		20
o-Chlorotoluene	93		94		70-130	1		20
p-Chlorotoluene	92		93		70-130	1		20
1,2-Dibromo-3-chloropropane	110		110		70-130	0		20
Hexachlorobutadiene	100		100		70-130	0		20
Isopropylbenzene	90		94		70-130	4		20
p-Isopropyltoluene	92		93		70-130	1		20
Naphthalene	100		93		70-130	7		20
n-Propylbenzene	93		94		70-130	1		20
1,2,3-Trichlorobenzene	96		95		70-130	1		20
1,2,4-Trichlorobenzene	98		95		70-130	3		20
1,3,5-Trimethylbenzene	93		94		70-130	1		20
1,2,4-Trimethylbenzene	94		95		70-130	1		20
Diethyl ether	99		100		70-130	1		20
Diisopropyl Ether	94		97		70-130	3		20
Ethyl-Tert-Butyl-Ether	97		98		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01,04,06,08-09,11,13,16-17,20,22,24,27 Batch: WG1489380-3 WG1489380-4								
Tertiary-Amyl Methyl Ether	97		98		70-130	1		20
1,4-Dioxane	**136**	Q	116		70-130	16		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	89		90		70-130
Toluene-d8	105		101		70-130
4-Bromofluorobenzene	100		102		70-130
Dibromofluoromethane	92		99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,05,07,10,12,14,18-19,21,25-26 Batch: WG1489718-3 WG1489718-4								
Methylene chloride	92		82		70-130	11		20
1,1-Dichloroethane	92		83		70-130	10		20
Chloroform	87		80		70-130	8		20
Carbon tetrachloride	97		87		70-130	11		20
1,2-Dichloropropane	91		83		70-130	9		20
Dibromochloromethane	92		88		70-130	4		20
1,1,2-Trichloroethane	96		91		70-130	5		20
Tetrachloroethene	92		87		70-130	6		20
Chlorobenzene	92		88		70-130	4		20
Trichlorofluoromethane	92		86		70-130	7		20
1,2-Dichloroethane	92		86		70-130	7		20
1,1,1-Trichloroethane	94		87		70-130	8		20
Bromodichloromethane	91		84		70-130	8		20
trans-1,3-Dichloropropene	100		94		70-130	6		20
cis-1,3-Dichloropropene	96		88		70-130	9		20
1,1-Dichloropropene	96		85		70-130	12		20
Bromoform	92		91		70-130	1		20
1,1,2,2-Tetrachloroethane	97		92		70-130	5		20
Benzene	93		84		70-130	10		20
Toluene	88		84		70-130	5		20
Ethylbenzene	100		93		70-130	7		20
Chloromethane	95		86		70-130	10		20
Bromomethane	84		76		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,05,07,10,12,14,18-19,21,25-26 Batch: WG1489718-3 WG1489718-4								
Vinyl chloride	87		79		70-130	10		20
Chloroethane	92		83		70-130	10		20
1,1-Dichloroethene	97		89		70-130	9		20
trans-1,2-Dichloroethene	93		84		70-130	10		20
Trichloroethene	93		87		70-130	7		20
1,2-Dichlorobenzene	92		87		70-130	6		20
1,3-Dichlorobenzene	93		86		70-130	8		20
1,4-Dichlorobenzene	91		87		70-130	4		20
Methyl tert butyl ether	98		91		70-130	7		20
p/m-Xylene	100		95		70-130	5		20
o-Xylene	90		85		70-130	6		20
cis-1,2-Dichloroethene	94		85		70-130	10		20
Dibromomethane	91		86		70-130	6		20
1,2,3-Trichloropropane	93		89		70-130	4		20
Styrene	95		90		70-130	5		20
Dichlorodifluoromethane	85		77		70-130	10		20
Acetone	100		92		70-130	8		20
Carbon disulfide	91		83		70-130	9		20
Methyl ethyl ketone	100		96		70-130	4		20
Methyl isobutyl ketone	99		96		70-130	3		20
2-Hexanone	100		95		70-130	5		20
Bromochloromethane	93		87		70-130	7		20
Tetrahydrofuran	110		99		70-130	11		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,05,07,10,12,14,18-19,21,25-26 Batch: WG1489718-3 WG1489718-4								
2,2-Dichloropropane	95		85		70-130	11		20
1,2-Dibromoethane	96		90		70-130	6		20
1,3-Dichloropropane	94		87		70-130	8		20
1,1,1,2-Tetrachloroethane	93		85		70-130	9		20
Bromobenzene	90		86		70-130	5		20
n-Butylbenzene	95		89		70-130	7		20
sec-Butylbenzene	94		86		70-130	9		20
tert-Butylbenzene	92		87		70-130	6		20
o-Chlorotoluene	92		86		70-130	7		20
p-Chlorotoluene	92		85		70-130	8		20
1,2-Dibromo-3-chloropropane	100		98		70-130	2		20
Hexachlorobutadiene	95		90		70-130	5		20
Isopropylbenzene	93		87		70-130	7		20
p-Isopropyltoluene	89		83		70-130	7		20
Naphthalene	90		87		70-130	3		20
n-Propylbenzene	93		86		70-130	8		20
1,2,3-Trichlorobenzene	95		91		70-130	4		20
1,2,4-Trichlorobenzene	92		88		70-130	4		20
1,3,5-Trimethylbenzene	92		87		70-130	6		20
1,2,4-Trimethylbenzene	94		89		70-130	5		20
Diethyl ether	93		91		70-130	2		20
Diisopropyl Ether	93		84		70-130	10		20
Ethyl-Tert-Butyl-Ether	94		88		70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,05,07,10,12,14,18-19,21,25-26 Batch: WG1489718-3 WG1489718-4								
Tertiary-Amyl Methyl Ether	92		85		70-130	8		20
1,4-Dioxane	98		92		70-130	6		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	84		89		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	97		95		70-130
Dibromofluoromethane	94		94		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 23 Batch: WG1489835-3 WG1489835-4								
Methylene chloride	94		91		70-130	3		20
1,1-Dichloroethane	97		92		70-130	5		20
Chloroform	100		98		70-130	2		20
Carbon tetrachloride	120		120		70-130	0		20
1,2-Dichloropropane	93		89		70-130	4		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	92		90		70-130	2		20
Tetrachloroethene	120		110		70-130	9		20
Chlorobenzene	98		96		70-130	2		20
Trichlorofluoromethane	120		120		70-130	0		20
1,2-Dichloroethane	120		120		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	100		99		70-130	1		20
trans-1,3-Dichloropropene	100		98		70-130	2		20
cis-1,3-Dichloropropene	100		97		70-130	3		20
1,1-Dichloropropene	99		94		70-130	5		20
Bromoform	95		94		70-130	1		20
1,1,2,2-Tetrachloroethane	74		72		70-130	3		20
Benzene	93		90		70-130	3		20
Toluene	93		90		70-130	3		20
Ethylbenzene	98		94		70-130	4		20
Chloromethane	100		92		70-130	8		20
Bromomethane	110		99		70-130	11		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 23 Batch: WG1489835-3 WG1489835-4								
Vinyl chloride	87		82		70-130	6		20
Chloroethane	81		77		70-130	5		20
1,1-Dichloroethene	94		92		70-130	2		20
trans-1,2-Dichloroethene	94		92		70-130	2		20
Trichloroethene	96		92		70-130	4		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	110		100		70-130	10		20
Methyl tert butyl ether	110		100		70-130	10		20
p/m-Xylene	95		90		70-130	5		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	98		93		70-130	5		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	79		78		70-130	1		20
Styrene	100		95		70-130	5		20
Dichlorodifluoromethane	110		110		70-130	0		20
Acetone	110		110		70-130	0		20
Carbon disulfide	83		79		70-130	5		20
Methyl ethyl ketone	110		110		70-130	0		20
Methyl isobutyl ketone	88		86		70-130	2		20
2-Hexanone	96		96		70-130	0		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 23 Batch: WG1489835-3 WG1489835-4								
2,2-Dichloropropane	120		110		70-130	9		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	92		90		70-130	2		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	92		90		70-130	2		20
n-Butylbenzene	100		95		70-130	5		20
sec-Butylbenzene	92		88		70-130	4		20
tert-Butylbenzene	98		93		70-130	5		20
o-Chlorotoluene	86		81		70-130	6		20
p-Chlorotoluene	89		85		70-130	5		20
1,2-Dibromo-3-chloropropane	85		87		70-130	2		20
Hexachlorobutadiene	96		93		70-130	3		20
Isopropylbenzene	84		80		70-130	5		20
p-Isopropyltoluene	100		96		70-130	4		20
Naphthalene	110		110		70-130	0		20
n-Propylbenzene	88		83		70-130	6		20
1,2,3-Trichlorobenzene	130		120		70-130	8		20
1,2,4-Trichlorobenzene	120		120		70-130	0		20
1,3,5-Trimethylbenzene	110		110		70-130	0		20
1,2,4-Trimethylbenzene	120		110		70-130	9		20
Diethyl ether	87		81		70-130	7		20
Diisopropyl Ether	110		100		70-130	10		20
Ethyl-Tert-Butyl-Ether	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 23 Batch: WG1489835-3 WG1489835-4								
Tertiary-Amyl Methyl Ether	100		99		70-130	1		20
1,4-Dioxane	96		84		70-130	13		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	115		115		70-130
Toluene-d8	93		92		70-130
4-Bromofluorobenzene	78		75		70-130
Dibromofluoromethane	106		105		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,05,07,10,12,14,18-19,21,25-26 QC Batch ID: WG1489718-6 WG1489718-7 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
Methylene chloride	ND	10	12	120		11	110		70-130	9		20
1,1-Dichloroethane	ND	10	12	120		11	110		70-130	9		20
Chloroform	ND	10	12	120		11	110		70-130	9		20
Carbon tetrachloride	ND	10	14	**140**	Q	12	120		70-130	15		20
1,2-Dichloropropane	ND	10	12	120		10	100		70-130	18		20
Dibromochloromethane	ND	10	11	110		9.9	99		70-130	11		20
1,1,2-Trichloroethane	ND	10	11	110		10	100		70-130	10		20
Tetrachloroethene	ND	10	12	120		10	100		70-130	18		20
Chlorobenzene	ND	10	11	110		10	100		70-130	10		20
Trichlorofluoromethane	ND	10	14	**140**	Q	12	120		70-130	15		20
1,2-Dichloroethane	ND	10	12	120		10	100		70-130	18		20
1,1,1-Trichloroethane	ND	10	13	130		11	110		70-130	17		20
Bromodichloromethane	ND	10	12	120		10	100		70-130	18		20
trans-1,3-Dichloropropene	ND	10	11	110		9.7	97		70-130	13		20
cis-1,3-Dichloropropene	ND	10	11	110		9.7	97		70-130	13		20
1,1-Dichloropropene	ND	10	13	130		11	110		70-130	17		20
Bromoform	ND	10	10	100		9.4	94		70-130	6		20
1,1,2,2-Tetrachloroethane	ND	10	11	110		10	100		70-130	10		20
Benzene	ND	10	12	120		11	110		70-130	9		20
Toluene	ND	10	11	110		10	100		70-130	10		20
Ethylbenzene	ND	10	12	120		11	110		70-130	9		20
Chloromethane	ND	10	13	130		12	120		70-130	8		20
Bromomethane	ND	10	12	120		11	110		70-130	9		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,05,07,10,12,14,18-19,21,25-26 QC Batch ID: WG1489718-6 WG1489718-7 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
Vinyl chloride	ND	10	13	130		11	110		70-130	17		20
Chloroethane	ND	10	13	130		12	120		70-130	8		20
1,1-Dichloroethene	ND	10	13	130		12	120		70-130	8		20
trans-1,2-Dichloroethene	ND	10	12	120		11	110		70-130	9		20
Trichloroethene	ND	10	12	120		11	110		70-130	9		20
1,2-Dichlorobenzene	ND	10	11	110		10	100		70-130	10		20
1,3-Dichlorobenzene	ND	10	11	110		10	100		70-130	10		20
1,4-Dichlorobenzene	ND	10	11	110		10	100		70-130	10		20
Methyl tert butyl ether	ND	10	11	110		9.6	96		70-130	14		20
p/m-Xylene	ND	20	25	125		23	115		70-130	8		20
o-Xylene	ND	20	23	115		20	100		70-130	14		20
cis-1,2-Dichloroethene	ND	10	12	120		11	110		70-130	9		20
Dibromomethane	ND	10	12	120		10	100		70-130	18		20
1,2,3-Trichloropropane	ND	10	10	100		9.7	97		70-130	3		20
Styrene	ND	20	24	120		21	105		70-130	13		20
Dichlorodifluoromethane	ND	10	12	120		11	110		70-130	9		20
Acetone	ND	10	11	110		9.4	94		70-130	16		20
Carbon disulfide	ND	10	13	130		12	120		70-130	8		20
Methyl ethyl ketone	ND	10	11	110		9.0	90		70-130	20		20
Methyl isobutyl ketone	ND	10	9.4	94		8.0	80		70-130	16		20
2-Hexanone	ND	10	9.0	90		8.1	81		70-130	11		20
Bromochloromethane	ND	10	13	130		11	110		70-130	17		20
Tetrahydrofuran	ND	10	11	110		9.4	94		70-130	16		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,05,07,10,12,14,18-19,21,25-26 QC Batch ID: WG1489718-6 WG1489718-7 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
2,2-Dichloropropane	ND	10	12	120		9.8	98		70-130	20		20
1,2-Dibromoethane	ND	10	11	110		9.7	97		70-130	13		20
1,3-Dichloropropane	ND	10	11	110		9.6	96		70-130	14		20
1,1,1,2-Tetrachloroethane	ND	10	11	110		10	100		70-130	10		20
Bromobenzene	ND	10	10	100		9.9	99		70-130	1		20
n-Butylbenzene	ND	10	12	120		11	110		70-130	9		20
sec-Butylbenzene	ND	10	12	120		11	110		70-130	9		20
tert-Butylbenzene	ND	10	11	110		11	110		70-130	0		20
o-Chlorotoluene	ND	10	12	120		11	110		70-130	9		20
p-Chlorotoluene	ND	10	11	110		11	110		70-130	0		20
1,2-Dibromo-3-chloropropane	ND	10	10	100		9.1	91		70-130	9		20
Hexachlorobutadiene	ND	10	11	110		10	100		70-130	10		20
Isopropylbenzene	ND	10	11	110		11	110		70-130	0		20
p-Isopropyltoluene	ND	10	11	110		10	100		70-130	10		20
Naphthalene	ND	10	9.6	96		8.7	87		70-130	10		20
n-Propylbenzene	ND	10	12	120		11	110		70-130	9		20
1,2,3-Trichlorobenzene	ND	10	11	110		9.8	98		70-130	12		20
1,2,4-Trichlorobenzene	ND	10	11	110		9.3	93		70-130	17		20
1,3,5-Trimethylbenzene	ND	10	12	120		11	110		70-130	9		20
1,2,4-Trimethylbenzene	ND	10	12	120		11	110		70-130	9		20
Diethyl ether	ND	10	12	120		10	100		70-130	18		20
Diisopropyl Ether	ND	10	11	110		9.8	98		70-130	12		20
Ethyl-Tert-Butyl-Ether	ND	10	11	110		9.6	96		70-130	14		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,05,07,10,12,14,18-19,21,25-26 QC Batch ID: WG1489718-6 WG1489718-7 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
Tertiary-Amyl Methyl Ether	ND	10	10	100		8.9	89		70-130	12		20
1,4-Dioxane	ND	500	460	92		420	84		70-130	9		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		101		70-130
4-Bromofluorobenzene	95		100		70-130
Dibromofluoromethane	107		102		70-130
Toluene-d8	99		98		70-130

SEMIVOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-01
Client ID: SW-1-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 17:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/17/21 20:30
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-01 Date Collected: 04/08/21 17:30
Client ID: SW-1-04082021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	34		15-110
Nitrobenzene-d5	45		30-130
2-Fluorobiphenyl	46		30-130
2,4,6-Tribromophenol	73		15-110
4-Terphenyl-d14	83		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-01
Client ID: SW-1-04082021
Sample Location: CONCORD, MA

Date Collected: 04/08/21 17:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 23:53
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.06	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-01	Date Collected:	04/08/21 17:30
Client ID:	SW-1-04082021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		15-110
Phenol-d6	33		15-110
Nitrobenzene-d5	43		30-130
2-Fluorobiphenyl	54		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	96		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-01	Date Collected:	04/08/21 17:30
Client ID:	SW-1-04082021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/23/21 22:32		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-03
Client ID: PT-11P-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 09:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 14:25
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-03	Date Collected:	04/09/21 09:30
Client ID:	PT-11P-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	87		30-130
2,4,6-Tribromophenol	98		15-110
4-Terphenyl-d14	99		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-03
Client ID: PT-11P-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 09:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 19:08
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-03	Date Collected:	04/09/21 09:30
Client ID:	PT-11P-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		15-110
Phenol-d6	61		15-110
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	109		15-110
4-Terphenyl-d14	125		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-03	Date Collected:	04/09/21 09:30
Client ID:	PT-11P-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/23/21 22:55		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS

Lab Number: L2118225

Project Number: 3252H

Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-04
Client ID: GZW-7S-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 09:45
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 14:50
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-04
Client ID: GZW-7S-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 09:45
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	63		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	89		15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-04
Client ID: GZW-7S-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 09:45
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 19:27
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-04	Date Collected:	04/09/21 09:45
Client ID:	GZW-7S-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	58		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	93		30-130
2,4,6-Tribromophenol	97		15-110
4-Terphenyl-d14	120		30-130

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118225

Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-04
Client ID: GZW-7S-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 09:45
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 23:18
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-05	Date Collected:	04/09/21 10:00
Client ID:	MW-S40-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/16/21 09:01
Analytical Date:	04/19/21 15:16		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-05 Date Collected: 04/09/21 10:00

Client ID: MW-S40-04092021 Date Received: 04/09/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	41		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	92		30-130
2,4,6-Tribromophenol	85		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-05
Client ID: MW-S40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 19:46
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-05	Date Collected:	04/09/21 10:00
Client ID:	MW-S40-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	92		30-130
2,4,6-Tribromophenol	98		15-110
4-Terphenyl-d14	119		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-05	Date Collected:	04/09/21 10:00
Client ID:	MW-S40-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/23/21 23:41		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-06
Client ID: HA20-CMT-2I-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 15:41
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.4	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-06	Date Collected:	04/09/21 10:00
Client ID:	HA20-CMT-2I-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	1.3	J	ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	96		15-110
Phenol-d6	62		15-110
Nitrobenzene-d5	90		30-130
2-Fluorobiphenyl	106		30-130
2,4,6-Tribromophenol	**155**	Q	15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-06
Client ID: HA20-CMT-2I-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 20:05
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.04	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	0.03	J	ug/l	0.10	0.01	1
Acenaphthylene	0.22		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.03	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.03	J	ug/l	0.10	0.01	1
Pyrene	0.09	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.18		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-06	Date Collected:	04/09/21 10:00
Client ID:	HA20-CMT-2I-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	95		15-110
Phenol-d6	82		15-110
Nitrobenzene-d5	104		30-130
2-Fluorobiphenyl	112		30-130
2,4,6-Tribromophenol	**146**	Q	15-110
4-Terphenyl-d14	130		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-06
Client ID: HA20-CMT-2I-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 11:08
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.78		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-07	Date Collected:	04/09/21 10:00
Client ID:	MW-S18-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/16/21 09:01
Analytical Date:	04/19/21 16:07		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-07 Date Collected: 04/09/21 10:00
Client ID: MW-S18-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	73		30-130
2-Fluorobiphenyl	96		30-130
2,4,6-Tribromophenol	**133**	Q	15-110
4-Terphenyl-d14	94		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-07
Client ID: MW-S18-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 20:24
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-07	Date Collected:	04/09/21 10:00
Client ID:	MW-S18-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		15-110
Phenol-d6	68		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	95		30-130
2,4,6-Tribromophenol	**125**	Q	15-110
4-Terphenyl-d14	113		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-07	Date Collected:	04/09/21 10:00
Client ID:	MW-S18-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/24/21 01:12		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-08
Client ID: MW-S04-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 16:33
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-08
Client ID: MW-S04-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 10:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	98		30-130
2,4,6-Tribromophenol	99		15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-08
Client ID: MW-S04-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 20:43
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.17		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.05	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-08	Date Collected:	04/09/21 10:30
Client ID:	MW-S04-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	68		15-110
Phenol-d6	60		15-110
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	105		15-110
4-Terphenyl-d14	108		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-08	Date Collected:	04/09/21 10:30
Client ID:	MW-S04-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/24/21 01:34		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-09	Date Collected:	04/09/21 10:35
Client ID:	EW-1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 07:19		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.77	0.512	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.7	6.50	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.7	5.86	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.2	19.6	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.2	19.9	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	77		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	60		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	59		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	58		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	52		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-09	Date Collected:	04/09/21 10:35
Client ID:	EW-1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 14:58		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	1.50	J	ng/l	1.77	0.360	1
Perfluoropentanoic Acid (PFPeA)	0.904	J	ng/l	1.77	0.350	1
Perfluorobutanesulfonic Acid (PFBS)	1.01	J	ng/l	1.77	0.210	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.77	0.399	1
Perfluorohexanoic Acid (PFHxA)	0.933	J	ng/l	1.77	0.290	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.77	0.217	1
Perfluoroheptanoic Acid (PFHpA)	0.558	J	ng/l	1.77	0.199	1
Perfluorohexanesulfonic Acid (PFHxS)	1.04	J	ng/l	1.77	0.332	1
Perfluorooctanoic Acid (PFOA)	4.81		ng/l	1.77	0.208	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.77	1.18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.77	0.608	1
Perfluorononanoic Acid (PFNA)	0.488	J	ng/l	1.77	0.276	1
Perfluorooctanesulfonic Acid (PFOS)	2.59	F	ng/l	1.77	0.445	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.77	0.268	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.77	1.07	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.77	0.989	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.77	0.572	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.77	0.230	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.77	0.866	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.77	0.710	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.77	0.329	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.77	0.289	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.77	0.219	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.2	20.0	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.77	0.297	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.53	1.10	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.53	1.01	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-09	Date Collected:	04/09/21 10:35
Client ID:	EW-1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.77	0.544	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.42	1.78	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.77	0.244	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.77	0.259	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	89		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	81		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	82		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	78		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	100		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	90		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	108		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	81		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	95		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	85		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	113		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	68		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	91		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	69		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	97		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	93		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	95		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	108		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-09
Client ID: EW-1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:35
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/17/21 22:02
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-09
Client ID: EW-1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:35
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	89		15-110
Phenol-d6	72		15-110
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	98		15-110
4-Terphenyl-d14	82		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-09
Client ID: EW-1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:35
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 21:02
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-09	Date Collected:	04/09/21 10:35
Client ID:	EW-1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		15-110
Phenol-d6	72		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	94		30-130
2,4,6-Tribromophenol	105		15-110
4-Terphenyl-d14	102		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-09
Client ID: EW-1-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 10:35
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 11:28
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	2.91		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-10
Client ID: MW-S20-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 11:50
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 16:59
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-10	Date Collected:	04/09/21 11:50
Client ID:	MW-S20-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-110
Phenol-d6	30		15-110
Nitrobenzene-d5	40		30-130
2-Fluorobiphenyl	45		30-130
2,4,6-Tribromophenol	85		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS

Lab Number: L2118225

Project Number: 3252H

Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-10
Client ID: MW-S20-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 11:50
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 21:21
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.07	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.07	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.13		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.05	J	ug/l	0.10	0.01	1
Chrysene	0.06	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.03	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.12		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.05	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.12		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-10	Date Collected:	04/09/21 11:50
Client ID:	MW-S20-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	37		15-110
Nitrobenzene-d5	46		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	85		15-110
4-Terphenyl-d14	87		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-10	Date Collected:	04/09/21 11:50
Client ID:	MW-S20-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/25/21 11:48		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.378		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-11	Date Collected:	04/09/21 10:15
Client ID:	MW-SD38-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/16/21 09:01
Analytical Date:	04/19/21 17:24		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-11 Date Collected: 04/09/21 10:15
Client ID: MW-SD38-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	84		30-130
2,4,6-Tribromophenol	94		15-110
4-Terphenyl-d14	89		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-11
Client ID: MW-SD38-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 21:40
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-11
Client ID: MW-SD38-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 10:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		15-110
Phenol-d6	69		15-110
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	91		30-130
2,4,6-Tribromophenol	105		15-110
4-Terphenyl-d14	106		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-11	Date Collected:	04/09/21 10:15
Client ID:	MW-SD38-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/25/21 12:09		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.14		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-12	Date Collected:	04/09/21 12:00
Client ID:	GZW-7-1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 07:26		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.77	0.514	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.7	6.52	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.7	5.89	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.3	19.7	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.3	20.0	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	77		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	59		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	58		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	59		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	56		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-12
Client ID: GZW-7-1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 12:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 15:15
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	2.48		ng/l	1.77	0.362	1
Perfluoropentanoic Acid (PFPeA)	5.15		ng/l	1.77	0.351	1
Perfluorobutanesulfonic Acid (PFBS)	2.41		ng/l	1.77	0.211	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.77	0.401	1
Perfluorohexanoic Acid (PFHxA)	4.38		ng/l	1.77	0.291	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.77	0.217	1
Perfluoroheptanoic Acid (PFHpA)	2.02		ng/l	1.77	0.200	1
Perfluorohexanesulfonic Acid (PFHxS)	5.56	F	ng/l	1.77	0.333	1
Perfluorooctanoic Acid (PFOA)	4.90		ng/l	1.77	0.209	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.77	1.18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.77	0.610	1
Perfluorononanoic Acid (PFNA)	0.319	J	ng/l	1.77	0.276	1
Perfluorooctanesulfonic Acid (PFOS)	0.709	J	ng/l	1.77	0.447	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.77	0.270	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.77	1.07	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.77	0.993	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.77	0.574	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.77	0.230	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.77	0.869	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.77	0.713	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.77	0.330	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.77	0.290	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.77	0.220	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.3	20.1	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.77	0.298	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.55	1.10	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.55	1.02	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-12	Date Collected:	04/09/21 12:00
Client ID:	GZW-7-1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.77	0.546	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.43	1.79	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.77	0.245	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.77	0.260	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	66		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	63		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	82		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	69		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**56**	Q	57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**59**	Q	60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	96		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	67		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	79		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	67		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	79		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	98		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	57		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	81		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	64		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	88		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	89		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	68		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	110		10-206

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-12
Client ID: GZW-7-1-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 12:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 17:50
Analyst: SZ
Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-12	Date Collected:	04/09/21 12:00
Client ID:	GZW-7-1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	95		30-130
2,4,6-Tribromophenol	**114**	Q	15-110
4-Terphenyl-d14	102		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-12
Client ID: GZW-7-1-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 12:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 21:59
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	0.05	J	ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.03	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.03	J	ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-12	Date Collected:	04/09/21 12:00
Client ID:	GZW-7-1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	95		30-130
2,4,6-Tribromophenol	**119**	Q	15-110
4-Terphenyl-d14	124		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-12
Client ID: GZW-7-1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 12:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 03:07
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-13
Client ID: MW-BS38-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 12:55
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 18:15
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 10:32

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-13	Date Collected:	04/09/21 12:55
Client ID:	MW-BS38-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	52		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	97		15-110
4-Terphenyl-d14	90		30-130

Project Name: NUCLEAR METALS

Lab Number: L2118225

Project Number: 3252H

Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-13
Client ID: MW-BS38-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 12:55
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 15:58
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-13	Date Collected:	04/09/21 12:55
Client ID:	MW-BS38-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	61		15-110
Nitrobenzene-d5	98		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	86		15-110
4-Terphenyl-d14	100		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-13
Client ID: MW-BS38-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 12:55
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 03:30
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 18:41
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 10:32

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-14	Date Collected:	04/09/21 13:00
Client ID:	MW-BS40-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**0**	Q	15-110
Phenol-d6	**6**	Q	15-110
Nitrobenzene-d5	54		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	**0**	Q	15-110
4-Terphenyl-d14	90		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 16:18
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.01	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**1**	Q	15-110
Phenol-d6	**7**	Q	15-110
Nitrobenzene-d5	94		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	**4**	Q	15-110
4-Terphenyl-d14	86		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 03:51
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14 RE
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/22/21 21:40
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/22/21 14:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14 RE
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	79		15-110
4-Terphenyl-d14	71		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14 RE
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 08:48
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/22/21 14:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-14 RE	Date Collected:	04/09/21 13:00
Client ID:	MW-BS40-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	97		15-110
4-Terphenyl-d14	84		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-15	Date Collected:	04/09/21 14:20
Client ID:	FIELD BLANK1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/12/21 16:35
Analytical Date:	04/16/21 06:29		
Analyst:	RS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.15	0.438	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.15	0.425	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.15	0.255	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.15	0.485	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.15	0.352	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.15	0.263	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.15	0.242	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.15	0.404	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.15	0.253	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.15	1.43	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.15	0.738	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.15	0.335	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.15	0.541	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.15	0.326	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.15	1.30	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.15	1.20	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.15	0.695	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.15	0.279	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.15	1.05	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.15	0.863	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.15	0.399	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.15	0.351	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.15	0.266	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	53.7	24.4	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.15	0.361	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.29	1.33	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.29	1.23	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-15	Date Collected:	04/09/21 14:20
Client ID:	FIELD BLANK1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.15	0.661	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.37	2.17	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.15	0.297	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.15	0.315	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	89		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	120		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	97		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	98		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	85		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	86		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	95		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	94		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	85		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	91		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	85		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	116		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	64		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	95		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	58		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	95		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	78		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	116		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	105		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-15	Date Collected:	04/09/21 14:20
Client ID:	FIELD BLANK1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/12/21 16:35
Analytical Date:	04/17/21 23:24		
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.15	0.622	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	21.5	7.90	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	21.5	7.13	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	53.7	23.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	53.7	24.2	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	58		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**1**	Q	10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**1**	Q	10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	14		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	15		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-16
Client ID: EQ BLANK1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:30
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/16/21 06:45
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.85	0.378	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.85	0.367	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.85	0.220	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.85	0.418	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.85	0.304	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.85	0.227	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.85	0.208	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.85	0.348	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.85	0.218	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.85	1.23	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.85	0.637	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.85	0.289	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.85	0.467	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.85	0.281	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.85	1.12	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.85	1.04	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.85	0.600	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.85	0.241	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.85	0.907	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.85	0.744	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.85	0.344	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.85	0.303	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.85	0.230	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	46.3	21.0	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.85	0.311	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.70	1.15	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.70	1.06	1

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-16
Client ID: EQ BLANK1-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 14:30
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.85	0.570	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.63	1.87	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.85	0.256	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.85	0.271	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	97		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	127		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	102		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	105		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	93		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	95		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	108		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	99		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	99		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	95		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	98		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	94		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	122		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	67		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	104		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	63		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	100		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	83		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	121		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	139		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-16	Date Collected:	04/09/21 14:30
Client ID:	EQ BLANK1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/16/21 10:32
Analytical Date:	04/19/21 19:07		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-16	Date Collected:	04/09/21 14:30
Client ID:	EQ BLANK1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	49		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	98		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-16
Client ID: EQ BLANK1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:30
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 16:39
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-16	Date Collected:	04/09/21 14:30
Client ID:	EQ BLANK1-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-110
Phenol-d6	46		15-110
Nitrobenzene-d5	87		30-130
2-Fluorobiphenyl	84		30-130
2,4,6-Tribromophenol	84		15-110
4-Terphenyl-d14	96		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-16
Client ID: EQ BLANK1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:30
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 04:13
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-16 RE
Client ID: EQ BLANK1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:30
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/21 03:55
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.74	0.505	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.4	6.40	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.4	5.78	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	43.5	19.3	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	43.5	19.6	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	66		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	52		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	50		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	60		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	58		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-17
Client ID: MW-BS04-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:20
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 19:32
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 10:32

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.2	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-17	Date Collected:	04/09/21 13:20
Client ID:	MW-BS04-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		15-110
Phenol-d6	58		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	97		30-130
2,4,6-Tribromophenol	105		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-17
Client ID: MW-BS04-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 13:20
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 16:59
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	0.03	J	ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-17	Date Collected:	04/09/21 13:20
Client ID:	MW-BS04-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		15-110
Phenol-d6	67		15-110
Nitrobenzene-d5	124		30-130
2-Fluorobiphenyl	84		30-130
2,4,6-Tribromophenol	96		15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-17
Client ID: MW-BS04-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:20
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 04:36
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-18
Client ID: MW-SD40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 19:57
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 10:32

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-18	Date Collected:	04/09/21 14:40
Client ID:	MW-SD40-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	68		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	82		15-110
4-Terphenyl-d14	83		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-18
Client ID: MW-SD40-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 17:19
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-18	Date Collected:	04/09/21 14:40
Client ID:	MW-SD40-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	69		15-110
Nitrobenzene-d5	121		30-130
2-Fluorobiphenyl	103		30-130
2,4,6-Tribromophenol	84		15-110
4-Terphenyl-d14	101		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-18
Client ID: MW-SD40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 12:29
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	4.32		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-19
Client ID: MW-2-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 20:23
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 10:32

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-19	Date Collected:	04/09/21 14:15
Client ID:	MW-2-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	43		15-110
Nitrobenzene-d5	56		30-130
2-Fluorobiphenyl	71		30-130
2,4,6-Tribromophenol	92		15-110
4-Terphenyl-d14	86		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-19
Client ID: MW-2-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 14:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 17:39
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.04	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-19	Date Collected:	04/09/21 14:15
Client ID:	MW-2-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		15-110
Phenol-d6	60		15-110
Nitrobenzene-d5	108		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	72		15-110
4-Terphenyl-d14	107		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-19	Date Collected:	04/09/21 14:15
Client ID:	MW-2-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/24/21 05:20		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS

Lab Number: L2118225

Project Number: 3252H

Report Date: 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-20	Date Collected:	04/09/21 14:25
Client ID:	MW-2-04092021DUP	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/16/21 10:32
Analytical Date:	04/19/21 20:48		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-20	Date Collected:	04/09/21 14:25
Client ID:	MW-2-04092021DUP	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	93		30-130
2,4,6-Tribromophenol	91		15-110
4-Terphenyl-d14	86		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-20	Date Collected:	04/09/21 14:25
Client ID:	MW-2-04092021DUP	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 09:08
Analytical Date:	04/20/21 17:59		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-20	Date Collected:	04/09/21 14:25
Client ID:	MW-2-04092021DUP	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		15-110
Phenol-d6	62		15-110
Nitrobenzene-d5	126		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	92		15-110
4-Terphenyl-d14	107		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-20	Date Collected:	04/09/21 14:25
Client ID:	MW-2-04092021DUP	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/24/21 05:43		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-21
Client ID: MW-SD41-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 13:20
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 21:14
Analyst: SZ
Extraction Method: EPA 3510C
Extraction Date: 04/16/21 10:32

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-21	Date Collected:	04/09/21 13:20
Client ID:	MW-SD41-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		15-110
Phenol-d6	71		15-110
Nitrobenzene-d5	88		30-130
2-Fluorobiphenyl	119		30-130
2,4,6-Tribromophenol	82		15-110
4-Terphenyl-d14	106		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-21
Client ID: MW-SD41-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:20
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 18:19
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-21
Client ID: MW-SD41-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:20
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	73		15-110
Nitrobenzene-d5	125		30-130
2-Fluorobiphenyl	93		30-130
2,4,6-Tribromophenol	75		15-110
4-Terphenyl-d14	**141**	Q	30-130

Project Name: NUCLEAR METALS

Lab Number: L2118225

Project Number: 3252H

Report Date: 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-21	Date Collected:	04/09/21 13:20
Client ID:	MW-SD41-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/25/21 12:50		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.820		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-22
Client ID: ML-3-3-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/17/21 22:25
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 10:32

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.8	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-22	Date Collected:	04/09/21 15:00
Client ID:	ML-3-3-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	78		15-110
4-Terphenyl-d14	63		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-22
Client ID: ML-3-3-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 18:39
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.49		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.20		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-22	Date Collected:	04/09/21 15:00
Client ID:	ML-3-3-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	57		15-110
4-Terphenyl-d14	71		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-22	Date Collected:	04/09/21 15:00
Client ID:	ML-3-3-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 07:30
Analytical Date:	04/25/21 13:10		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.80		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-23
Client ID: GZW-8-2-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 16:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 21:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 10:32

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-23 Date Collected: 04/09/21 16:00

Client ID: GZW-8-2-04092021 Date Received: 04/09/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	92		30-130
2,4,6-Tribromophenol	91		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-23
Client ID: GZW-8-2-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 16:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 18:59
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.34		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.09	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-23	Date Collected:	04/09/21 16:00
Client ID:	GZW-8-2-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	69		15-110
Nitrobenzene-d5	118		30-130
2-Fluorobiphenyl	81		30-130
2,4,6-Tribromophenol	85		15-110
4-Terphenyl-d14	105		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-23	Date Collected:	04/09/21 16:00
Client ID:	GZW-8-2-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 13:00
Analytical Date:	04/23/21 01:15		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-24
Client ID: MW-S23-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:55
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 21:40
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-24	Date Collected:	04/09/21 15:55
Client ID:	MW-S23-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	87		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS

Lab Number: L2118225

Project Number: 3252H

Report Date: 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-24	Date Collected:	04/09/21 15:55
Client ID:	MW-S23-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 13:06
Analytical Date:	04/20/21 14:37		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.02	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-24 Date Collected: 04/09/21 15:55
Client ID: MW-S23-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	93		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	75		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-24
Client ID: MW-S23-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:55
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 01:37
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-25
Client ID: HA20-CMT-3S-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 22:03
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	1.6	J	ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-25
Client ID: HA20-CMT-3S-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	68		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	**130**	Q	15-110
4-Terphenyl-d14	92		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-25	Date Collected:	04/09/21 14:40
Client ID:	HA20-CMT-3S-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 13:06
Analytical Date:	04/20/21 14:57		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-25	Date Collected:	04/09/21 14:40
Client ID:	HA20-CMT-3S-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	102		30-130
2-Fluorobiphenyl	58		30-130
2,4,6-Tribromophenol	**128**	Q	15-110
4-Terphenyl-d14	101		30-130

Project Name: NUCLEAR METALS

Lab Number: L2118225

Project Number: 3252H

Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-25
Client ID: HA20-CMT-3S-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 02:00
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.529		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-26	Date Collected:	04/09/21 15:40
Client ID:	MW-SD35-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/16/21 13:00
Analytical Date:	04/19/21 21:18		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118225

Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-26	Date Collected:	04/09/21 15:40
Client ID:	MW-SD35-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-26	Date Collected:	04/09/21 15:40
Client ID:	MW-SD35-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 13:06
Analytical Date:	04/20/21 15:18		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-26	Date Collected:	04/09/21 15:40
Client ID:	MW-SD35-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	46		15-110
Nitrobenzene-d5	94		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	57		15-110
4-Terphenyl-d14	91		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-26	Date Collected:	04/09/21 15:40
Client ID:	MW-SD35-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 13:00
Analytical Date:	04/23/21 02:23		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-27
Client ID: MW-BS35-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 22:25
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-27	Date Collected:	04/09/21 13:15
Client ID:	MW-BS35-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	86		15-110
4-Terphenyl-d14	87		30-130

Project Name: NUCLEAR METALS

Lab Number: L2118225

Project Number: 3252H

Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-27
Client ID: MW-BS35-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 15:38
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 13:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	0.03	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-27 Date Collected: 04/09/21 13:15

Client ID: MW-BS35-04092021 Date Received: 04/09/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	104		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	82		15-110
4-Terphenyl-d14	100		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-27	Date Collected:	04/09/21 13:15
Client ID:	MW-BS35-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/15/21 13:00
Analytical Date:	04/23/21 02:45		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/15/21 18:53
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 15-16 Batch: WG1485193-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/15/21 18:53
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 04/12/21 16:35

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 15-16 Batch: WG1485193-1					
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/15/21 18:53	Extraction Date:	04/12/21 16:35
Analyst:	RS		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 15-16 Batch: WG1485193-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	125		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	101		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	95		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	95		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	91		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	94		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	94		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	88		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	91		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	91		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	89		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	64		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	97		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	44		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	69		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	86		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	83		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	125		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	133		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/17/21 21:50	Extraction Date:	04/12/21 16:35
Analyst:	SG		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 15-16 Batch: WG1485193-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	52		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**2**	Q	10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**1**	Q	10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	14		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	14		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 05:38
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 09,12 Batch: WG1486508-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	50		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	46		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 09,12 Batch: WG1486508-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 09,12 Batch: WG1486508-1					
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/20/21 08:02	Extraction Date:	04/15/21 09:20
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 09,12 Batch: WG1486508-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	84		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	88		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	60		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	78		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	97		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	91		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	114		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	84		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	121		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	69		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	89		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	46		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	103		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	91		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	90		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	113		10-206

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 21:22
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03-14,16-22 Batch: WG1486517-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 11:24
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/15/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 23-27 Batch: WG1486525-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/17/21 15:55	Extraction Date:	04/15/21 11:46
Analyst:	EK		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG1486645-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/17/21 15:55	Extraction Date:	04/15/21 11:46
Analyst:	EK		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG1486645-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/17/21 15:55
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:46

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG1486645-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	46		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	60		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 21:11
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:50

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01 Batch: WG1486647-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	0.05	J	ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 21:11
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/15/21 11:50

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01 Batch: WG1486647-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	83		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 12:17
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03-14,16-23 Batch: WG1487022-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 12:17
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03-14,16-23 Batch: WG1487022-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 12:17
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:01

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03-14,16-23 Batch: WG1487022-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	91		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/17/21 18:10
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/16/21 09:06

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 03-14,16-23 Batch: WG1487027-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/17/21 18:10	Extraction Date:	04/16/21 09:06
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 03-14,16-23 Batch: WG1487027-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	90		30-130
2,4,6-Tribromophenol	91		15-110
4-Terphenyl-d14	112		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/17/21 13:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 24-27 Batch: WG1487149-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/17/21 13:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 24-27 Batch: WG1487149-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/17/21 13:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 13:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 24-27 Batch: WG1487149-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	91		15-110
4-Terphenyl-d14	78		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/20/21 14:17	Extraction Date:	04/16/21 13:06
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 24-27 Batch: WG1487152-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 14:17
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 13:06

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 24-27 Batch: WG1487152-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	52		30-130
2,4,6-Tribromophenol	68		15-110
4-Terphenyl-d14	87		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/21/21 02:57	Extraction Date:	04/20/21 16:36
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 16 Batch: WG1488529-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	72		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	48		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	45		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	62		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	59		10-187

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/22/21 08:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 14 Batch: WG1489093-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/22/21 08:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 14 Batch: WG1489093-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/22/21 08:59	Extraction Date:	04/21/21 17:17
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 14 Batch: WG1489093-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	31		15-110
Nitrobenzene-d5	42		30-130
2-Fluorobiphenyl	41		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	43		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 11:54
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 14 Batch: WG1489095-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	0.03	J	ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	0.01	J	ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	0.02	J	ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/22/21 11:54	Extraction Date:	04/21/21 17:19
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 14 Batch: WG1489095-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	48		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	54		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118225

Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 Batch: WG1485193-2								
Perfluorobutanoic Acid (PFBA)	91		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	88		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	89		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	96		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	92		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	103		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	90		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	101		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	90		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	110		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	96		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	89		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	95		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	91		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	104		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	94		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	90		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	89		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	94		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	89		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	77		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	88		-		67-153	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 Batch: WG1485193-2								
Perfluorotridecanoic Acid (PFTrDA)	91		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	92		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	109		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	89		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	112		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	46		-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	112		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	**190**	Q	-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	95		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	100		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 Batch: WG1485193-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	90				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	119				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	99				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	95				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	92				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	91				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	87				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	85				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	88				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	86				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	92				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	64				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	94				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	47				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	78				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	95				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	85				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	101				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	134				10-206

Lab Control Sample Analysis
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Project Name: NUCLEAR METALS
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 Batch: WG1485193-2								
Perfluorooctanesulfonamide (FOSA)	89		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	113		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	113		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	109		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	112		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	62				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**2**	Q			10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**2**	Q			10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	18				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	19				10-187

Lab Control Sample Analysis
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 09,12 Batch: WG1486508-2								
Perfluorooctanesulfonamide (FOSA)	86		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	109		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	119		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	99		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	103		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	46				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	42				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	49				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	48				10-187

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 09,12 Batch: WG1486508-2								
Perfluorobutanoic Acid (PFBA)	106		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	108		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	115		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	118		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	110		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	93		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	107		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	100		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	109		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	110		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	106		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	116		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	108		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	113		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	109		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	104		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	142		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	114		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	106		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	107		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	102		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	99		-		67-153	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Lab Number: L2118225
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 09,12 Batch: WG1486508-2								
Perfluorotridecanoic Acid (PFTrDA)	121		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	113		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	120		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	106		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	97		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	78		-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	128		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	102		-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	86		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	77		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 09,12 Batch: WG1486508-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	88				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	77				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	67				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	72				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	77				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	93				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	85				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	125				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	79				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	83				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	130				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	63				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	93				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	47				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	96				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	96				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	81				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	117				10-206

Lab Control Sample Analysis
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Project Number: 3252H

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01,03-14,16-22 Batch: WG1486517-2 WG1486517-3								
1,4-Dioxane	105		105		40-140	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	44		50		15-110

Lab Control Sample Analysis
Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 23-27 Batch: WG1486525-2 WG1486525-3								
1,4-Dioxane	118		118		40-140	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	38		40		15-110

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1486645-2 WG1486645-3								
Acenaphthene	73		71		40-140	3		20
1,2,4-Trichlorobenzene	60		60		40-140	0		20
Hexachlorobenzene	77		76		40-140	1		20
Bis(2-chloroethyl)ether	70		67		40-140	4		20
2-Chloronaphthalene	67		66		40-140	2		20
1,2-Dichlorobenzene	55		59		40-140	7		20
1,3-Dichlorobenzene	53		55		40-140	4		20
1,4-Dichlorobenzene	55		57		40-140	4		20
3,3'-Dichlorobenzidine	52		58		40-140	11		20
2,4-Dinitrotoluene	89		87		40-140	2		20
2,6-Dinitrotoluene	89		86		40-140	3		20
Azobenzene	79		77		40-140	3		20
Fluoranthene	82		81		40-140	1		20
4-Bromophenyl phenyl ether	80		75		40-140	6		20
Bis(2-chloroisopropyl)ether	73		74		40-140	1		20
Bis(2-chloroethoxy)methane	74		72		40-140	3		20
Hexachlorobutadiene	55		54		40-140	2		20
Hexachloroethane	54		54		40-140	0		20
Isophorone	72		70		40-140	3		20
Naphthalene	63		63		40-140	0		20
Nitrobenzene	80		79		40-140	1		20
Bis(2-ethylhexyl)phthalate	93		94		40-140	1		20
Butyl benzyl phthalate	96		89		40-140	8		20

Lab Control Sample Analysis
Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1486645-2 WG1486645-3								
Di-n-butylphthalate	85		84		40-140	1		20
Di-n-octylphthalate	91		90		40-140	1		20
Diethyl phthalate	84		81		40-140	4		20
Dimethyl phthalate	83		78		40-140	6		20
Benzo(a)anthracene	82		82		40-140	0		20
Benzo(a)pyrene	82		83		40-140	1		20
Benzo(b)fluoranthene	80		83		40-140	4		20
Benzo(k)fluoranthene	84		82		40-140	2		20
Chrysene	80		82		40-140	2		20
Acenaphthylene	70		68		40-140	3		20
Anthracene	80		79		40-140	1		20
Benzo(ghi)perylene	81		85		40-140	5		20
Fluorene	75		72		40-140	4		20
Phenanthrene	78		77		40-140	1		20
Dibenzo(a,h)anthracene	83		86		40-140	4		20
Indeno(1,2,3-cd)pyrene	84		88		40-140	5		20
Pyrene	81		78		40-140	4		20
Aniline	**27**	Q	**27**	Q	40-140	0		20
4-Chloroaniline	50		48		40-140	4		20
Dibenzofuran	72		71		40-140	1		20
2-Methylnaphthalene	64		64		40-140	0		20
Acetophenone	71		70		40-140	1		20
2,4,6-Trichlorophenol	78		78		30-130	0		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1486645-2 WG1486645-3								
2-Chlorophenol	73		70		30-130	4		20
2,4-Dichlorophenol	81		80		30-130	1		20
2,4-Dimethylphenol	34		50		30-130	**38**	Q	20
2-Nitrophenol	96		98		30-130	2		20
4-Nitrophenol	85		81		30-130	5		20
2,4-Dinitrophenol	110		106		30-130	4		20
Pentachlorophenol	94		90		30-130	4		20
Phenol	56		54		30-130	4		20
2-Methylphenol	64		65		30-130	2		20
3-Methylphenol/4-Methylphenol	72		73		30-130	1		20
2,4,5-Trichlorophenol	84		82		30-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	77		74		15-110
Phenol-d6	69		66		15-110
Nitrobenzene-d5	80		78		30-130
2-Fluorobiphenyl	70		67		30-130
2,4,6-Tribromophenol	109		105		15-110
4-Terphenyl-d14	80		76		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01 Batch: WG1486647-2 WG1486647-3								
Acenaphthene	79		77		40-140	3		20
2-Chloronaphthalene	75		74		40-140	1		20
Fluoranthene	95		97		40-140	2		20
Hexachlorobutadiene	69		68		40-140	1		20
Naphthalene	70		69		40-140	1		20
Benzo(a)anthracene	86		89		40-140	3		20
Benzo(a)pyrene	89		91		40-140	2		20
Benzo(b)fluoranthene	90		95		40-140	5		20
Benzo(k)fluoranthene	94		94		40-140	0		20
Chrysene	94		96		40-140	2		20
Acenaphthylene	79		75		40-140	5		20
Anthracene	85		85		40-140	0		20
Benzo(ghi)perylene	89		90		40-140	1		20
Fluorene	85		83		40-140	2		20
Phenanthrene	85		85		40-140	0		20
Dibenzo(a,h)anthracene	91		96		40-140	5		20
Indeno(1,2,3-cd)pyrene	88		90		40-140	2		20
Pyrene	98		100		40-140	2		20
2-Methylnaphthalene	72		71		40-140	1		20
Pentachlorophenol	105		108		30-130	3		20
Hexachlorobenzene	80		79		40-140	1		20
Hexachloroethane	62		60		40-140	3		20

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Project Number: 3252H
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Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01 Batch: WG1486647-2 WG1486647-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	66		65		15-110
Phenol-d6	64		62		15-110
Nitrobenzene-d5	103		99		30-130
2-Fluorobiphenyl	73		71		30-130
2,4,6-Tribromophenol	**112**	Q	110		15-110
4-Terphenyl-d14	102		105		30-130

Lab Control Sample Analysis
Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03-14,16-23 Batch: WG1487022-2 WG1487022-3								
Acenaphthene	84		78		40-140	7		20
1,2,4-Trichlorobenzene	84		79		40-140	6		20
Hexachlorobenzene	111		96		40-140	14		20
Bis(2-chloroethyl)ether	71		61		40-140	15		20
2-Chloronaphthalene	91		82		40-140	10		20
1,2-Dichlorobenzene	82		72		40-140	13		20
1,3-Dichlorobenzene	78		70		40-140	11		20
1,4-Dichlorobenzene	78		70		40-140	11		20
3,3'-Dichlorobenzidine	62		72		40-140	15		20
2,4-Dinitrotoluene	97		86		40-140	12		20
2,6-Dinitrotoluene	103		104		40-140	1		20
Azobenzene	96		89		40-140	8		20
Fluoranthene	91		96		40-140	5		20
4-Bromophenyl phenyl ether	110		95		40-140	15		20
Bis(2-chloroisopropyl)ether	65		59		40-140	10		20
Bis(2-chloroethoxy)methane	73		71		40-140	3		20
Hexachlorobutadiene	83		78		40-140	6		20
Hexachloroethane	81		76		40-140	6		20
Isophorone	82		79		40-140	4		20
Naphthalene	75		70		40-140	7		20
Nitrobenzene	71		76		40-140	7		20
Bis(2-ethylhexyl)phthalate	86		85		40-140	1		20
Butyl benzyl phthalate	91		92		40-140	1		20

Lab Control Sample Analysis
Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03-14,16-23 Batch: WG1487022-2 WG1487022-3								
Di-n-butylphthalate	86		94		40-140	9		20
Di-n-octylphthalate	105		105		40-140	0		20
Diethyl phthalate	106		108		40-140	2		20
Dimethyl phthalate	116		114		40-140	2		20
Benzo(a)anthracene	78		78		40-140	0		20
Benzo(a)pyrene	102		101		40-140	1		20
Benzo(b)fluoranthene	78		77		40-140	1		20
Benzo(k)fluoranthene	116		115		40-140	1		20
Chrysene	103		97		40-140	6		20
Acenaphthylene	97		89		40-140	9		20
Anthracene	92		86		40-140	7		20
Benzo(ghi)perylene	81		95		40-140	16		20
Fluorene	108		91		40-140	17		20
Phenanthrene	80		78		40-140	3		20
Dibenzo(a,h)anthracene	95		102		40-140	7		20
Indeno(1,2,3-cd)pyrene	79		91		40-140	14		20
Pyrene	94		84		40-140	11		20
Aniline	**27**	Q	43		40-140	**46**	Q	20
4-Chloroaniline	53		62		40-140	16		20
Dibenzofuran	97		81		40-140	18		20
2-Methylnaphthalene	74		72		40-140	3		20
Acetophenone	80		75		40-140	6		20
2,4,6-Trichlorophenol	93		92		30-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03-14,16-23 Batch: WG1487022-2 WG1487022-3								
2-Chlorophenol	77		68		30-130	12		20
2,4-Dichlorophenol	88		81		30-130	8		20
2,4-Dimethylphenol	44		67		30-130	**41**	Q	20
2-Nitrophenol	85		80		30-130	6		20
4-Nitrophenol	68		62		30-130	9		20
2,4-Dinitrophenol	95		86		30-130	10		20
Pentachlorophenol	95		86		30-130	10		20
Phenol	55		55		30-130	0		20
2-Methylphenol	67		68		30-130	1		20
3-Methylphenol/4-Methylphenol	73		73		30-130	0		20
2,4,5-Trichlorophenol	113		103		30-130	9		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	86		78		15-110
Phenol-d6	58		56		15-110
Nitrobenzene-d5	75		68		30-130
2-Fluorobiphenyl	89		86		30-130
2,4,6-Tribromophenol	**124**	Q	**118**	Q	15-110
4-Terphenyl-d14	87		88		30-130

Lab Control Sample Analysis
Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 03-14,16-23 Batch: WG1487027-2 WG1487027-3								
Acenaphthene	95		93		40-140	2		20
2-Chloronaphthalene	93		92		40-140	1		20
Fluoranthene	105		104		40-140	1		20
Hexachlorobutadiene	88		86		40-140	2		20
Naphthalene	90		90		40-140	0		20
Benzo(a)anthracene	98		99		40-140	1		20
Benzo(a)pyrene	104		109		40-140	5		20
Benzo(b)fluoranthene	106		106		40-140	0		20
Benzo(k)fluoranthene	108		113		40-140	5		20
Chrysene	97		98		40-140	1		20
Acenaphthylene	97		94		40-140	3		20
Anthracene	103		102		40-140	1		20
Benzo(ghi)perylene	92		95		40-140	3		20
Fluorene	100		98		40-140	2		20
Phenanthrene	98		97		40-140	1		20
Dibenzo(a,h)anthracene	99		101		40-140	2		20
Indeno(1,2,3-cd)pyrene	96		99		40-140	3		20
Pyrene	103		102		40-140	1		20
2-Methylnaphthalene	96		96		40-140	0		20
Pentachlorophenol	94		92		30-130	2		20
Hexachlorobenzene	96		95		40-140	1		20
Hexachloroethane	83		81		40-140	2		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 03-14,16-23 Batch: WG1487027-2 WG1487027-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	80		81		15-110
Phenol-d6	71		70		15-110
Nitrobenzene-d5	87		86		30-130
2-Fluorobiphenyl	90		89		30-130
2,4,6-Tribromophenol	105		**112**	Q	15-110
4-Terphenyl-d14	107		106		30-130

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Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 24-27 Batch: WG1487149-2 WG1487149-3								
Acenaphthene	82		72		40-140	13		20
1,2,4-Trichlorobenzene	74		63		40-140	16		20
Hexachlorobenzene	81		74		40-140	9		20
Bis(2-chloroethyl)ether	78		65		40-140	18		20
2-Chloronaphthalene	77		68		40-140	12		20
1,2-Dichlorobenzene	70		61		40-140	14		20
1,3-Dichlorobenzene	70		60		40-140	15		20
1,4-Dichlorobenzene	70		60		40-140	15		20
3,3'-Dichlorobenzidine	77		70		40-140	10		20
2,4-Dinitrotoluene	89		83		40-140	7		20
2,6-Dinitrotoluene	95		83		40-140	13		20
Azobenzene	83		77		40-140	8		20
Fluoranthene	84		80		40-140	5		20
4-Bromophenyl phenyl ether	85		79		40-140	7		20
Bis(2-chloroisopropyl)ether	86		72		40-140	18		20
Bis(2-chloroethoxy)methane	82		69		40-140	17		20
Hexachlorobutadiene	68		62		40-140	9		20
Hexachloroethane	71		61		40-140	15		20
Isophorone	79		68		40-140	15		20
Naphthalene	74		65		40-140	13		20
Nitrobenzene	91		76		40-140	18		20
Bis(2-ethylhexyl)phthalate	99		96		40-140	3		20
Butyl benzyl phthalate	97		91		40-140	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 24-27 Batch: WG1487149-2 WG1487149-3								
Di-n-butylphthalate	88		83		40-140	6		20
Di-n-octylphthalate	101		93		40-140	8		20
Diethyl phthalate	88		81		40-140	8		20
Dimethyl phthalate	86		78		40-140	10		20
Benzo(a)anthracene	87		82		40-140	6		20
Benzo(a)pyrene	92		81		40-140	13		20
Benzo(b)fluoranthene	90		80		40-140	12		20
Benzo(k)fluoranthene	91		81		40-140	12		20
Chrysene	85		80		40-140	6		20
Acenaphthylene	78		69		40-140	12		20
Anthracene	84		79		40-140	6		20
Benzo(ghi)perylene	88		82		40-140	7		20
Fluorene	81		74		40-140	9		20
Phenanthrene	81		78		40-140	4		20
Dibenzo(a,h)anthracene	90		84		40-140	7		20
Indeno(1,2,3-cd)pyrene	90		80		40-140	12		20
Pyrene	81		76		40-140	6		20
Aniline	**35**	Q	**18**	Q	40-140	**64**	Q	20
4-Chloroaniline	52		**39**	Q	40-140	**29**	Q	20
Dibenzofuran	78		70		40-140	11		20
2-Methylnaphthalene	76		65		40-140	16		20
Acetophenone	78		67		40-140	15		20
2,4,6-Trichlorophenol	88		77		30-130	13		20

Lab Control Sample Analysis
Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 24-27 Batch: WG1487149-2 WG1487149-3								
2-Chlorophenol	80		69		30-130	15		20
2,4-Dichlorophenol	91		75		30-130	19		20
2,4-Dimethylphenol	78		61		30-130	**24**	Q	20
2-Nitrophenol	108		95		30-130	13		20
4-Nitrophenol	84		73		30-130	14		20
2,4-Dinitrophenol	117		104		30-130	12		20
Pentachlorophenol	96		92		30-130	4		20
Phenol	58		47		30-130	**21**	Q	20
2-Methylphenol	78		65		30-130	18		20
3-Methylphenol/4-Methylphenol	81		66		30-130	20		20
2,4,5-Trichlorophenol	90		78		30-130	14		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	85		71		15-110
Phenol-d6	73		59		15-110
Nitrobenzene-d5	93		77		30-130
2-Fluorobiphenyl	78		68		30-130
2,4,6-Tribromophenol	**123**	Q	**115**	Q	15-110
4-Terphenyl-d14	87		78		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 24-27 Batch: WG1487152-2 WG1487152-3								
Acenaphthene	91		85		40-140	7		20
2-Chloronaphthalene	62		84		40-140	**30**	Q	20
Fluoranthene	122		97		40-140	**23**	Q	20
Hexachlorobutadiene	84		63		40-140	**29**	Q	20
Naphthalene	77		77		40-140	0		20
Benzo(a)anthracene	92		94		40-140	2		20
Benzo(a)pyrene	92		93		40-140	1		20
Benzo(b)fluoranthene	95		94		40-140	1		20
Benzo(k)fluoranthene	101		103		40-140	2		20
Chrysene	97		98		40-140	1		20
Acenaphthylene	60		75		40-140	**22**	Q	20
Anthracene	89		86		40-140	3		20
Benzo(ghi)perylene	92		93		40-140	1		20
Fluorene	112		63		40-140	**56**	Q	20
Phenanthrene	90		88		40-140	2		20
Dibenzo(a,h)anthracene	98		118		40-140	19		20
Indeno(1,2,3-cd)pyrene	92		114		40-140	**21**	Q	20
Pyrene	118		99		40-140	18		20
2-Methylnaphthalene	79		87		40-140	10		20
Pentachlorophenol	118		110		30-130	7		20
Hexachlorobenzene	107		86		40-140	**22**	Q	20
Hexachloroethane	73		70		40-140	4		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 24-27 Batch: WG1487152-2 WG1487152-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	72		64		15-110
Phenol-d6	67		53		15-110
Nitrobenzene-d5	114		110		30-130
2-Fluorobiphenyl	64		83		30-130
2,4,6-Tribromophenol	**131**	Q	69		15-110
4-Terphenyl-d14	**138**	Q	**131**	Q	30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 16 Batch: WG1488529-2								
Perfluorooctanesulfonamide (FOSA)	87		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	107		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	110		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	103		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	107		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	70				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	43				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	40				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	58				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	55				10-187

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 14 Batch: WG1489093-2 WG1489093-3								
Acenaphthene	82		91		40-140	10		20
1,2,4-Trichlorobenzene	84		84		40-140	0		20
Hexachlorobenzene	99		108		40-140	9		20
Bis(2-chloroethyl)ether	79		74		40-140	7		20
2-Chloronaphthalene	88		92		40-140	4		20
1,2-Dichlorobenzene	83		77		40-140	8		20
1,3-Dichlorobenzene	79		72		40-140	9		20
1,4-Dichlorobenzene	79		74		40-140	7		20
3,3'-Dichlorobenzidine	55		88		40-140	**46**	Q	20
2,4-Dinitrotoluene	93		104		40-140	11		20
2,6-Dinitrotoluene	93		97		40-140	4		20
Azobenzene	95		108		40-140	13		20
Fluoranthene	88		106		40-140	19		20
4-Bromophenyl phenyl ether	99		102		40-140	3		20
Bis(2-chloroisopropyl)ether	67		67		40-140	0		20
Bis(2-chloroethoxy)methane	75		77		40-140	3		20
Hexachlorobutadiene	87		84		40-140	4		20
Hexachloroethane	79		72		40-140	9		20
Isophorone	81		81		40-140	0		20
Naphthalene	83		86		40-140	4		20
Nitrobenzene	79		83		40-140	5		20
Bis(2-ethylhexyl)phthalate	76		80		40-140	5		20
Butyl benzyl phthalate	80		94		40-140	16		20

Lab Control Sample Analysis
Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 14 Batch: WG1489093-2 WG1489093-3								
Di-n-butylphthalate	77		87		40-140	12		20
Di-n-octylphthalate	78		86		40-140	10		20
Diethyl phthalate	94		106		40-140	12		20
Dimethyl phthalate	98		102		40-140	4		20
Benzo(a)anthracene	86		101		40-140	16		20
Benzo(a)pyrene	104		131		40-140	**23**	Q	20
Benzo(b)fluoranthene	96		112		40-140	15		20
Benzo(k)fluoranthene	92		117		40-140	**24**	Q	20
Chrysene	92		108		40-140	16		20
Acenaphthylene	88		94		40-140	7		20
Anthracene	90		104		40-140	14		20
Benzo(ghi)perylene	96		132		40-140	**32**	Q	20
Fluorene	92		103		40-140	11		20
Phenanthrene	88		100		40-140	13		20
Dibenzo(a,h)anthracene	97		127		40-140	**27**	Q	20
Indeno(1,2,3-cd)pyrene	88		126		40-140	**36**	Q	20
Pyrene	86		103		40-140	18		20
Aniline	**17**	Q	49		40-140	**97**	Q	20
4-Chloroaniline	52		79		40-140	**41**	Q	20
Dibenzofuran	89		100		40-140	12		20
2-Methylnaphthalene	82		87		40-140	6		20
Acetophenone	84		84		40-140	0		20
2,4,6-Trichlorophenol	98		102		30-130	4		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 14 Batch: WG1489093-2 WG1489093-3								
2-Chlorophenol	87		92		30-130	6		20
2,4-Dichlorophenol	94		91		30-130	3		20
2,4-Dimethylphenol	84		80		30-130	5		20
2-Nitrophenol	95		98		30-130	3		20
4-Nitrophenol	82		92		30-130	11		20
2,4-Dinitrophenol	106		116		30-130	9		20
Pentachlorophenol	98		102		30-130	4		20
Phenol	62		66		30-130	6		20
2-Methylphenol	75		82		30-130	9		20
3-Methylphenol/4-Methylphenol	80		84		30-130	5		20
2,4,5-Trichlorophenol	102		109		30-130	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	91		92		15-110
Phenol-d6	69		71		15-110
Nitrobenzene-d5	82		84		30-130
2-Fluorobiphenyl	82		86		30-130
2,4,6-Tribromophenol	**123**	Q	**135**	Q	15-110
4-Terphenyl-d14	82		93		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 14 Batch: WG1489095-2 WG1489095-3								
Acenaphthene	56		52		40-140	7		20
2-Chloronaphthalene	58		53		40-140	9		20
Fluoranthene	62		63		40-140	2		20
Hexachlorobutadiene	58		50		40-140	15		20
Naphthalene	55		49		40-140	12		20
Benzo(a)anthracene	56		58		40-140	4		20
Benzo(a)pyrene	55		60		40-140	9		20
Benzo(b)fluoranthene	56		62		40-140	10		20
Benzo(k)fluoranthene	62		64		40-140	3		20
Chrysene	58		64		40-140	10		20
Acenaphthylene	58		54		40-140	7		20
Anthracene	55		57		40-140	4		20
Benzo(ghi)perylene	54		57		40-140	5		20
Fluorene	59		57		40-140	3		20
Phenanthrene	55		57		40-140	4		20
Dibenzo(a,h)anthracene	57		59		40-140	3		20
Indeno(1,2,3-cd)pyrene	53		56		40-140	6		20
Pyrene	65		65		40-140	0		20
2-Methylnaphthalene	56		50		40-140	11		20
Pentachlorophenol	76		74		30-130	3		20
Hexachlorobenzene	55		54		40-140	2		20
Hexachloroethane	51		45		40-140	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 14 Batch: WG1489095-2 WG1489095-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	53		47		15-110
Phenol-d6	45		40		15-110
Nitrobenzene-d5	80		71		30-130
2-Fluorobiphenyl	56		49		30-130
2,4,6-Tribromophenol	86		89		15-110
4-Terphenyl-d14	69		72		30-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 QC Batch ID: WG1485193-3 QC Sample: L2117869-12 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	0.416J	37	34.1	91		-	-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	0.552J	37	33.6	89		-	-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	0.395J	32.8	30.2	91		-	-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	34.6	32.8	95		-	-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	0.922JF	37	35.4	93		-	-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	0.251J	34.8	32.1	92		-	-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	0.420J	37	34.3	92		-	-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	1.78JF	33.8	34.7	97		-	-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	2.06	37	37.2	95		-	-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	18.0	35.2	56.2	108		-	-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	35.2	31.8	90		-	-		61-179	-		30
Perfluorononanoic Acid (PFNA)	ND	37	33.6	91		-	-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	1.26J	34.3	32.6	91		-	-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	ND	37	33.9	92		-	-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	35.5	36.2	102		-	-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	35.6	30.2	85		-	-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	37	33.1	90		-	-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	37	32.7	88		-	-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	35.7	32.0	90		-	-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	ND	37	33.6	91		-	-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	37	31.8	86		-	-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	ND	37	30.3	82		-	-		67-153	-		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 QC Batch ID: WG1485193-3 QC Sample: L2117869-12 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	37	30.9	84		-	-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	37	35.5	96		-	-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	740	806	109		-	-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	34.9	29.0	83		-	-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	37	43.9	119		-	-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	ND	37	21.9	59		-	-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	35.8	35.0	98		-	-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	35.7	39.6	111		-	-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	34.5	32.7	95		-	-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	34.9	32.3	92		-	-		52-156	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	370	435	118		-	-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	370	421	114		-	-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	370	465	126		-	-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	370	424	115		-	-		66-176	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	134				10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	92				12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	119				14-147

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 QC Batch ID: WG1485193-3 QC Sample: L2117869-12 Client ID: MS Sample

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	55				10-165
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	15				10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	**8**	Q			10-189
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	55				27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	48				24-116
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**6**	Q			10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**3**	Q			10-161
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	82				55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	74				62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**56**	Q			57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	61				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	81				71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	83				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	66				22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	86				10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	68				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	87				62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	23				10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	68				62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	74				59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	75				70-131

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 09,12 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	0.525J	36.1	38.4	106		38.5	103		67-148	0		30
Perfluoropentanoic Acid (PFPeA)	ND	36.1	38.9	108		39.2	107		63-161	1		30
Perfluorobutanesulfonic Acid (PFBS)	ND	32	36.5	114		37.2	114		65-157	2		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	33.8	41.0	121		40.5	118		37-219	1		30
Perfluorohexanoic Acid (PFHxA)	0.443J	36.1	39.9	111		39.8	107		69-168	0		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	33.9	31.5	93		33.5	97		52-156	6		30
Perfluoroheptanoic Acid (PFHpA)	0.382J	36.1	39.4	109		39.5	106		58-159	0		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	33	33.7	102		34.5	103		69-177	2		30
Perfluorooctanoic Acid (PFOA)	2.95	36.1	41.6	115		43.3	110		63-159	4		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	34.4	40.0	116		43.0	123		49-187	7		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	34.4	38.5	112		39.5	113		61-179	3		30
Perfluorononanoic Acid (PFNA)	ND	36.1	41.0	114		40.3	110		68-171	2		30
Perfluorooctanesulfonic Acid (PFOS)	1.36J	33.5	37.4	112		37.9	107		52-151	1		30
Perfluorodecanoic Acid (PFDA)	ND	36.1	42.0	116		40.6	110		63-171	3		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	34.6	38.6	111		37.7	107		56-173	2		30
Perfluorononanesulfonic Acid (PFNS)	ND	34.7	35.4	102		34.6	98		48-150	2		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	36.1	41.5	115		44.6	121		60-166	7		30
Perfluoroundecanoic Acid (PFUnA)	ND	36.1	43.6	121		40.2	109		60-153	8		30
Perfluorodecanesulfonic Acid (PFDS)	ND	34.8	36.7	105		37.2	105		38-156	1		30
Perfluorooctanesulfonamide (FOSA)	ND	36.1	30.3F	84		33.0F	90		46-170	9		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	36.1	36.6	101		36.4	99		45-170	1		30
Perfluorododecanoic Acid (PFDoA)	ND	36.1	35.6	99		37.1	101		67-153	4		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 09,12 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	36.1	44.0	122		44.8	122		48-158	2		30
Perfluorotetradecanoic Acid (PFTA)	ND	36.1	41.6	115		41.8	114		59-182	0		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	722	867	120		678	92		57-162	24		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	34.1	36.8	108		36.8	106		69-143	0		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	36.1	33.6	93		31.5	86		40-167	6		30
Perfluorooctadecanoic Acid (PFODA)	ND	36.1	34.7	96		39.5F	107		10-119	13		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	34.9	44.2	126		45.5	128		85-154	3		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	34.8	34.2	98		36.1	102		81-188	5		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	33.6	28.4	84		28.2	82		55-158	1		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	34.1	26.4	78		25.6	74		52-156	3		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	361	390	108		417	113		10-185	7		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	361	427	118		414	113		10-202	3		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	361	361	100		361	98		10-209	0		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	361	357	99		390	106		66-176	9		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	142		159		10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	103		110		12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**158**	Q	**160**	Q	14-147

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 09,12 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	74		88		10-165
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		46		10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		51		10-189
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86		80		27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	73		74		24-116
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	55		54		10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	60		56		10-161
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	84		87		55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	84		87		62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77		79		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		83		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	99		100		71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	95		92		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	92		92		22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	120		114		10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	88		93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	78		82		62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		70		10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		94		69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		89		62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	82		84		59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81		85		70-131

Matrix Spike Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01,03-14,16-22 QC Batch ID: WG1486517-4 WG1486517-5 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
1,4-Dioxane	ND	4.63	5.09	110		4.99	112		30-140	2		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		43		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03-14,16-23 QC Batch ID: WG1487022-4 WG1487022-5 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
1,2,4-Trichlorobenzene	ND	18.2	14	77		10	55		40-140	**33**	Q	20
Bis(2-chloroethyl)ether	ND	18.2	11	61		10	55		40-140	10		20
1,2-Dichlorobenzene	ND	18.2	13	72		10	55		40-140	**26**	Q	20
1,3-Dichlorobenzene	ND	18.2	13	72		9.6	53		40-140	**30**	Q	20
1,4-Dichlorobenzene	ND	18.2	13	72		9.1	50		40-140	**35**	Q	20
3,3'-Dichlorobenzidine	ND	18.2	11	61		8.4	46		40-140	**27**	Q	20
2,4-Dinitrotoluene	ND	18.2	15	83		14	77		40-140	7		20
2,6-Dinitrotoluene	ND	18.2	20	110		16	88		40-140	**22**	Q	20
Azobenzene	ND	18.2	16	88		15	83		40-140	6		20
4-Bromophenyl phenyl ether	ND	18.2	17	94		16	88		40-140	6		20
Bis(2-chloroisopropyl)ether	ND	18.2	11	61		10	55		40-140	10		20
Bis(2-chloroethoxy)methane	ND	18.2	13	72		11	61		40-140	17		20
Isophorone	ND	18.2	17	94		13	72		40-140	**27**	Q	20
Nitrobenzene	ND	18.2	12	66		10	55		40-140	18		20
Bis(2-ethylhexyl)phthalate	ND	18.2	17	94		21	120		40-140	**21**	Q	20
Butyl benzyl phthalate	ND	18.2	16	88		14	77		40-140	13		20
Di-n-butylphthalate	ND	18.2	14	77		14	77		40-140	0		20
Di-n-octylphthalate	ND	18.2	20	110		15	83		40-140	**29**	Q	20
Diethyl phthalate	ND	18.2	17	94		16	88		40-140	6		20
Dimethyl phthalate	ND	18.2	22	120		19	100		40-140	15		20
Aniline	ND	18.2	5.1	**28**	Q	2.5	**14**	Q	40-140	**68**	Q	20
4-Chloroaniline	ND	18.2	8.8	48		4.5J	**25**	Q	40-140	**65**	Q	20
Dibenzofuran	ND	18.2	15	83		13	72		40-140	14		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03-14,16-23 QC Batch ID: WG1487022-4 WG1487022-5 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
Acetophenone	ND	18.2	13	72		11	61		40-140	17		20
2,4,6-Trichlorophenol	ND	18.2	18	99		14	77		30-130	**25**	Q	20
2-Chlorophenol	ND	18.2	13	72		10	55		30-130	**26**	Q	20
2,4-Dichlorophenol	ND	18.2	15	83		12	66		30-130	**22**	Q	20
2,4-Dimethylphenol	ND	18.2	11	61		5.2	**29**	Q	30-130	**72**	Q	20
2-Nitrophenol	ND	18.2	16	88		12	66		30-130	**29**	Q	20
4-Nitrophenol	ND	18.2	8.9J	49		10	55		30-130	12		20
2,4-Dinitrophenol	ND	18.2	17J	94		16J	88		30-130	6		20
Phenol	ND	18.2	9.4	52		8.1	45		30-130	15		20
2-Methylphenol	ND	18.2	12	66		9.6	53		30-130	**22**	Q	20
3-Methylphenol/4-Methylphenol	ND	18.2	13	72		10	55		30-130	**26**	Q	20
2,4,5-Trichlorophenol	ND	18.2	21	120		17	94		30-130	**21**	Q	20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	110		98		15-110
2-Fluorobiphenyl	94		75		30-130
2-Fluorophenol	71		60		15-110
4-Terphenyl-d14	82		70		30-130
Nitrobenzene-d5	71		56		30-130
Phenol-d6	55		44		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 03-14,16-23 QC Batch ID: WG1487027-4 WG1487027-5 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
Acenaphthene	ND	18.2	16	88		14	77		40-140	13		20
2-Chloronaphthalene	ND	18.2	16	88		13	72		40-140	**21**	Q	20
Fluoranthene	ND	18.2	17	94		16	88		40-140	6		20
Hexachlorobutadiene	ND	18.2	14	77		9.6	53		40-140	**37**	Q	20
Naphthalene	ND	18.2	14	77		11	61		40-140	**24**	Q	20
Benzo(a)anthracene	ND	18.2	16	88		15	83		40-140	6		20
Benzo(a)pyrene	ND	18.2	17	94		16	88		40-140	6		20
Benzo(b)fluoranthene	ND	18.2	17	94		16	88		40-140	6		20
Benzo(k)fluoranthene	ND	18.2	18	99		17	94		40-140	6		20
Chrysene	ND	18.2	16	88		15	83		40-140	6		20
Acenaphthylene	ND	18.2	16	88		14	77		40-140	13		20
Anthracene	ND	18.2	17	94		16	88		40-140	6		20
Benzo(ghi)perylene	ND	18.2	15	83		14	77		40-140	7		20
Fluorene	ND	18.2	16	88		15	83		40-140	6		20
Phenanthrene	ND	18.2	16	88		15	83		40-140	6		20
Dibenzo(a,h)anthracene	ND	18.2	16	88		15	83		40-140	6		20
Indeno(1,2,3-cd)pyrene	ND	18.2	16	88		14	77		40-140	13		20
Pyrene	ND	18.2	17	94		16	88		40-140	6		20
2-Methylnaphthalene	ND	18.2	16	88		12	66		40-140	**29**	Q	20
Pentachlorophenol	ND	18.2	16	88		15	83		30-130	6		20
Hexachlorobenzene	ND	18.2	16	88		15	83		40-140	6		20
Hexachloroethane	ND	18.2	14	77		9.0	50		40-140	**43**	Q	20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 03-14,16-23 QC Batch ID: WG1487027-4 WG1487027-5 QC Sample: L2118225-05 Client ID: MW-S40-04092021												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	110		97		15-110
2-Fluorobiphenyl	86		71		30-130
2-Fluorophenol	77		60		15-110
4-Terphenyl-d14	101		91		30-130
Nitrobenzene-d5	80		62		30-130
Phenol-d6	67		54		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 16 QC Batch ID: WG1488529-3 WG1488529-4 QC Sample: L2119881-04 Client ID: MS Sample												
Perfluorooctanesulfonamide (FOSA)	1.35JF	34.4	34.1	95		35.9F	98		46-170	5		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	344	356	103		377	107		10-185	6		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	344	356	103		372	106		10-202	4		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	344	338	98		368	104		10-209	8		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	344	358	104		383	109		66-176	7		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	54		53		10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	55		56		10-189
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	54		54		10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	57		53		10-161
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	65		68		10-112

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 QC Batch ID: WG1485193-4 QC Sample: L2117869-13 Client ID: DUP Sample						
Perfluorobutanoic Acid (PFBA)	ND	ND	ng/l	NC		30
Perfluoropentanoic Acid (PFPeA)	ND	ND	ng/l	NC		30
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/l	NC		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	ng/l	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/l	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 QC Batch ID: WG1485193-4 QC Sample: L2117869-13 Client ID: DUP Sample						
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	ND	ng/l	NC		30
Perfluorooctadecanoic Acid (PFODA)	ND	ND	ng/l	NC		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
PFOA/PFOS, Total	ND	ND	ng/l	NC		30
PFAS, Total (5)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	82		81		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	80		80		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91		89		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	72		69		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	70		69		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	79		79		60-129

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 QC Batch ID: WG1485193-4 QC Sample: L2117869-13 Client ID: DUP Sample

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	112		87		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		86		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	95		86		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	87		89		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	97		94		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	87		88		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	107		103		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	60		61		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	96		98		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	55		59		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	91		97		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	87		81		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	95		92		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	129		124		10-206

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 15-16 QC Batch ID: WG1485193-4 QC Sample: L2117869-13 Client ID: DUP Sample						
Perfluorooctanesulfonamide (FOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	31		29		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	**1**	Q	**1**	Q	10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	**1**	Q	**1**	Q	10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	**5**	Q	**5**	Q	10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	**5**	Q	**5**	Q	10-187

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-01
Client ID: SW-1-04082021
Sample Location: CONCORD, MA
Date Collected: 04/08/21 17:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 06:59	44,353.2	MR
Nitrogen, Nitrate	0.48		mg/l	0.10	0.023	1	-	04/10/21 06:59	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-03
Client ID: PT-11P-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 09:30
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:51	44,353.2	MR
Nitrogen, Nitrate	0.97		mg/l	0.10	0.023	1	-	04/10/21 07:51	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-04
Date Collected: 04/09/21 09:45
Client ID: GZW-7S-04092021
Date Received: 04/09/21
Sample Location: CONCORD, MA
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	20.9		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 08:01	44,353.2	MR
Nitrogen, Nitrate	2.2		mg/l	0.10	0.023	1	-	04/10/21 08:01	44,353.2	MR
Phosphorus, Total	0.008	J	mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:04	121,4500P-E	SD
Phosphorus, Orthophosphate	0.002	J	mg/l	0.005	0.001	1	-	04/10/21 04:17	121,4500P-E	AW
Dissolved Organic Carbon	0.41	J	mg/l	1.0	0.04	1	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	68.5		mg/l	5.00	0.839	10	-	04/14/21 23:38	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/14/21 23:27	44,300.0	AT
Sulfate	16.6		mg/l	1.00	0.454	1	-	04/14/21 23:27	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-05
Client ID: MW-S40-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:11	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:11	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-06
Client ID: HA20-CMT-2I-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	195.		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 08:00	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 08:00	44,353.2	MR
Phosphorus, Total	0.078		mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:05	121,4500P-E	SD
Phosphorus, Orthophosphate	0.066		mg/l	0.005	0.001	1	-	04/10/21 04:18	121,4500P-E	AW
Dissolved Organic Carbon	50.		mg/l	10	0.43	10	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	89.6		mg/l	12.5	2.10	25	-	04/15/21 01:16	44,300.0	AT
Fluoride	0.408		mg/l	0.050	0.037	1	-	04/14/21 20:54	44,300.0	AT
Sulfate	692.		mg/l	25.0	11.4	25	-	04/15/21 01:16	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-07
Client ID: MW-S18-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 10:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:42	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:42	44,353.2	MR

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-08	Date Collected:	04/09/21 10:30
Client ID:	MW-S04-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:33	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:33	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-09
Client ID: EW-1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 10:35
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:32	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:32	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-10
Client ID: MW-S20-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 11:50
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:47	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:47	44,353.2	MR

Project Name: NUCLEAR METALS　　**Lab Number:** L2118225
Project Number: 3252H　　**Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-11　　Date Collected: 04/09/21 10:15
Client ID: MW-SD38-04092021　　Date Received: 04/09/21
Sample Location: CONCORD, MA　　Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:30	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:30	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	43.1		mg/l	0.500	0.083	1	-	04/15/21 00:32	44,300.0	AT
Fluoride	0.068		mg/l	0.050	0.037	1	-	04/15/21 00:32	44,300.0	AT
Sulfate	59.3		mg/l	1.00	0.454	1	-	04/15/21 00:32	44,300.0	AT

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-12
Client ID: GZW-7-1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 12:00
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	20.9		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:12	44,353.2	MR
Nitrogen, Nitrate	1.6		mg/l	0.10	0.023	1	-	04/10/21 07:12	44,353.2	MR
Phosphorus, Total	0.005	J	mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:08	121,4500P-E	SD
Phosphorus, Orthophosphate	0.005		mg/l	0.005	0.001	1	-	04/10/21 04:18	121,4500P-E	AW
Dissolved Organic Carbon	0.57	J	mg/l	1.0	0.04	1	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	80.4		mg/l	5.00	0.839	10	-	04/15/21 00:44	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/14/21 21:16	44,300.0	AT
Sulfate	18.8		mg/l	1.00	0.454	1	-	04/14/21 21:16	44,300.0	AT

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-13	Date Collected:	04/09/21 12:55
Client ID:	MW-BS38-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:59	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:57	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2118225
Project Number: 3252H
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-14
Client ID: MW-BS40-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 13:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:29	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:29	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-16
Client ID: EQ BLANK1-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:30
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:39	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:39	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:09	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/10/21 04:18	121,4500P-E	AW
Dissolved Organic Carbon	0.13	J	mg/l	1.0	0.04	1	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	0.324	J	mg/l	0.500	0.083	1	-	04/14/21 20:21	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/14/21 20:21	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/14/21 20:21	44,300.0	AT

Project Name: NUCLEAR METALS | **Lab Number:** L2118225
Project Number: 3252H | **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-17
Client ID: MW-BS04-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 13:20
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:43	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:43	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-18
Client ID: MW-SD40-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:46	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:46	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-19
Client ID: MW-2-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 08:52	44,353.2	MR
Nitrogen, Nitrate	0.16		mg/l	0.10	0.023	1	-	04/10/21 08:52	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	13.9		mg/l	0.500	0.083	1	-	04/14/21 21:26	44,300.0	AT
Fluoride	0.060		mg/l	0.050	0.037	1	-	04/14/21 21:26	44,300.0	AT
Sulfate	10.6		mg/l	1.00	0.454	1	-	04/14/21 21:26	44,300.0	AT

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-20	Date Collected:	04/09/21 14:25
Client ID:	MW-2-04092021DUP	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:50	44,353.2	MR
Nitrogen, Nitrate	0.13		mg/l	0.10	0.023	1	-	04/10/21 07:50	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	13.4		mg/l	0.500	0.083	1	-	04/14/21 21:37	44,300.0	AT
Fluoride	0.052		mg/l	0.050	0.037	1	-	04/14/21 21:37	44,300.0	AT
Sulfate	10.6		mg/l	1.00	0.454	1	-	04/14/21 21:37	44,300.0	AT

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

SAMPLE RESULTS

Lab ID:	L2118225-21	Date Collected:	04/09/21 13:20
Client ID:	MW-SD41-04092021	Date Received:	04/09/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:56	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:56	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-22
Client ID: ML-3-3-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:45	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:45	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	21.1		mg/l	0.500	0.083	1	-	04/14/21 21:48	44,300.0	AT
Fluoride	0.402		mg/l	0.050	0.037	1	-	04/14/21 21:48	44,300.0	AT
Sulfate	13.1		mg/l	1.00	0.454	1	-	04/14/21 21:48	44,300.0	AT

SAMPLE RESULTS

Lab ID: L2118225-23
Client ID: GZW-8-2-04092021
Sample Location: CONCORD, MA
Date Collected: 04/09/21 16:00
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:34	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:34	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-24 Date Collected: 04/09/21 15:55
Client ID: MW-S23-04092021 Date Received: 04/09/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:48	44,353.2	MR
Nitrogen, Nitrate	1.2		mg/l	0.10	0.023	1	-	04/10/21 07:48	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-25
Client ID: HA20-CMT-3S-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 14:40
Date Received: 04/09/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	81.5		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 08:03	44,353.2	MR
Nitrogen, Nitrate	1.3		mg/l	0.10	0.023	1	-	04/10/21 08:03	44,353.2	MR
Phosphorus, Total	0.058		mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:10	121,4500P-E	SD
Phosphorus, Orthophosphate	0.028		mg/l	0.005	0.001	1	-	04/10/21 04:19	121,4500P-E	AW
Dissolved Organic Carbon	10.		mg/l	4.0	0.17	4	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	67.7		mg/l	5.00	0.839	10	-	04/15/21 01:27	44,300.0	AT
Fluoride	0.254		mg/l	0.050	0.037	1	-	04/14/21 21:59	44,300.0	AT
Sulfate	84.4		mg/l	1.00	0.454	1	-	04/14/21 21:59	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-26
Client ID: MW-SD35-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 15:40
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 08:04	44,353.2	MR
Nitrogen, Nitrate	0.023	J	mg/l	0.10	0.023	1	-	04/10/21 08:04	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	108.		mg/l	5.00	0.839	10	-	04/15/21 01:38	44,300.0	AT
Fluoride	0.045	J	mg/l	0.050	0.037	1	-	04/14/21 22:10	44,300.0	AT
Sulfate	17.6		mg/l	1.00	0.454	1	-	04/14/21 22:10	44,300.0	AT

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

SAMPLE RESULTS

Lab ID: L2118225-27
Client ID: MW-BS35-04092021
Sample Location: CONCORD, MA

Date Collected: 04/09/21 13:15
Date Received: 04/09/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 07:41	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 07:41	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	6.40		mg/l	0.500	0.083	1	-	04/14/21 22:21	44,300.0	AT
Fluoride	0.136		mg/l	0.050	0.037	1	-	04/14/21 22:21	44,300.0	AT
Sulfate	4.49		mg/l	1.00	0.454	1	-	04/14/21 22:21	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2118225
Project Number: 3252H **Report Date:** 04/26/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01,03-11 Batch: WG1484626-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 06:40	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01,03-11 Batch: WG1484627-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 06:43	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 12-14,16-22 Batch: WG1484629-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 06:49	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 12-14,16-22 Batch: WG1484631-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 06:52	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 23-27 Batch: WG1484632-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/10/21 06:54	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 23-27 Batch: WG1484633-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/10/21 06:57	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 04,06,12,16,25 Batch: WG1484649-1										
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/10/21 04:16	121,4500P-E	AW
Anions by Ion Chromatography - Westborough Lab for sample(s): 04,06,11-12,16,19 Batch: WG1486375-1										
Chloride	0.095	J	mg/l	0.500	0.083	1	-	04/14/21 19:04	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/14/21 19:04	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/14/21 19:04	44,300.0	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 20,22,25-27 Batch: WG1486376-1										
Chloride	0.095	J	mg/l	0.500	0.083	1	-	04/14/21 19:04	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	04/14/21 19:04	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	04/14/21 19:04	44,300.0	AT
General Chemistry - Westborough Lab for sample(s): 04,06,12,16,25 Batch: WG1487001-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 12:57	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 04,06,12,16,25 Batch: WG1487160-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 04,06,12,16,25 Batch: WG1487169-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 04,06,12,16,25 Batch: WG1488722-1										
Dissolved Organic Carbon	0.05	J	mg/l	1.0	0.04	1	-	04/21/21 05:42	1,9060A	DW

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03-11 Batch: WG1484626-2								
Nitrogen, Nitrate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03-11 Batch: WG1484627-2								
Nitrogen, Nitrite	106		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 12-14,16-22 Batch: WG1484629-2								
Nitrogen, Nitrate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 12-14,16-22 Batch: WG1484631-2								
Nitrogen, Nitrite	106		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 23-27 Batch: WG1484632-2								
Nitrogen, Nitrate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 23-27 Batch: WG1484633-2								
Nitrogen, Nitrite	106		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 04,06,12,16,25 Batch: WG1484649-2								
Phosphorus, Orthophosphate	95		-		90-110	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118225

Report Date: 04/26/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 04,06,11-12,16,19 Batch: WG1486375-2					
Chloride	100	-	90-110	-	
Fluoride	97	-	90-110	-	
Sulfate	98	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 20,22,25-27 Batch: WG1486376-2					
Chloride	100	-	90-110	-	
Fluoride	97	-	90-110	-	
Sulfate	98	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 04,06,12,16,25 Batch: WG1487001-2					
Phosphorus, Total	95	-	80-120	-	
General Chemistry - Westborough Lab Associated sample(s): 04,06,12,16,25 Batch: WG1488722-2					
Dissolved Organic Carbon	98	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03-11 QC Batch ID: WG1484626-4 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
Nitrogen, Nitrate	ND	4	3.9	98		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01,03-11 QC Batch ID: WG1484627-4 QC Sample: L2118225-05 Client ID: MW-S40-04092021												
Nitrogen, Nitrite	ND	4	5.4	**135**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 12-14,16-22 QC Batch ID: WG1484629-4 QC Sample: L2118225-12 Client ID: GZW-7-1-04092021												
Nitrogen, Nitrate	1.6	4	5.6	100		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 12-14,16-22 QC Batch ID: WG1484631-4 QC Sample: L2118225-12 Client ID: GZW-7-1-04092021												
Nitrogen, Nitrite	ND	4	5.7	**142**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 23-27 QC Batch ID: WG1484632-4 QC Sample: L2118225-26 Client ID: MW-SD35-04092021												
Nitrogen, Nitrate	0.023J	4	3.3	**82**	Q	-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 23-27 QC Batch ID: WG1484633-4 QC Sample: L2118225-26 Client ID: MW-SD35-04092021												
Nitrogen, Nitrite	ND	4	5.2	**130**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 04,06,12,16,25 QC Batch ID: WG1484649-4 QC Sample: L2118225-25 Client ID: HA20-CMT-3S-04092021												
Phosphorus, Orthophosphate	0.028	0.5	0.540	102		-	-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 04,06,11-12,16,19 QC Batch ID: WG1486375-3 QC Sample: L2118225-19 Client ID: MW-2-04092021										
Chloride	13.9	4	17.3	**84**	Q	-	-	90-110	-	18
Fluoride	0.060	0.4	0.428	92		-	-	90-110	-	15
Sulfate	10.6	8	18.3	96		-	-	90-110	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 20,22,25-27 QC Batch ID: WG1486376-3 QC Sample: L2118225-20 Client ID: MW-2-04092021DUP										
Chloride	13.4	4	17.1	92		-	-	90-110	-	18
Fluoride	0.052	0.4	0.430	94		-	-	90-110	-	15
Sulfate	10.6	8	18.5	99		-	-	90-110	-	20
General Chemistry - Westborough Lab Associated sample(s): 04,06,12,16,25 QC Batch ID: WG1488722-4 QC Sample: L2118225-04 Client ID: GZW-7S-04092021										
Dissolved Organic Carbon	0.41J	4	4.5	112		-	-	80-120	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03-11 QC Batch ID: WG1484626-3 QC Sample: L2118225-05 Client ID: MW-S40-04092021						
Nitrogen, Nitrate	ND	ND	mg/l	NC		6
General Chemistry - Westborough Lab Associated sample(s): 01,03-11 QC Batch ID: WG1484627-3 QC Sample: L2118225-05 Client ID: MW-S40-04092021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 12-14,16-22 QC Batch ID: WG1484629-3 QC Sample: L2118225-12 Client ID: GZW-7-1-04092021						
Nitrogen, Nitrate	1.6	1.6	mg/l	0		6
General Chemistry - Westborough Lab Associated sample(s): 12-14,16-22 QC Batch ID: WG1484631-3 QC Sample: L2118225-12 Client ID: GZW-7-1-04092021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 23-27 QC Batch ID: WG1484632-3 QC Sample: L2118225-26 Client ID: MW-SD35-04092021						
Nitrogen, Nitrate	0.023J	ND	mg/l	NC		6
General Chemistry - Westborough Lab Associated sample(s): 23-27 QC Batch ID: WG1484633-3 QC Sample: L2118225-26 Client ID: MW-SD35-04092021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 04,06,12,16,25 QC Batch ID: WG1484649-3 QC Sample: L2118225-25 Client ID: HA20-CMT-3S-04092021						
Phosphorus, Orthophosphate	0.028	0.028	mg/l	0		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 04,06,11-12,16,19 QC Batch ID: WG1486375-4 QC Sample: L2118225-19 Client ID: MW-2-04092021					
Chloride	13.9	13.7	mg/l	1	18
Fluoride	0.060	0.049J	mg/l	NC	15
Sulfate	10.6	10.7	mg/l	1	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 20,22,25-27 QC Batch ID: WG1486376-4 QC Sample: L2118225-20 Client ID: MW-2-04092021DUP					
Chloride	13.4	13.5	mg/l	1	18
Fluoride	0.052	0.049J	mg/l	NC	15
Sulfate	10.6	10.8	mg/l	2	20
General Chemistry - Westborough Lab Associated sample(s): 04,06,12,16,25 QC Batch ID: WG1488722-3 QC Sample: L2118225-04 Client ID: GZW-7S-04092021					
Dissolved Organic Carbon	0.41J	0.41J	mg/l	NC	20

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent
E	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-01A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-01B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-01C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-01D	Plastic 120ml unpreserved	E	7	7	5.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-01E	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-01F	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-01G	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-01H	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-02A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-02B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-03A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-03B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-03C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-03D	Plastic 120ml unpreserved	E	7	7	5.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-03E	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-03F	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-03G	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-03H	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-04A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-04B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-04C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-04D	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-04E	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-04F	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-04G	Plastic 250ml unpreserved/No Headspace	E	NA		5.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118225-04H	Plastic 250ml H2SO4 preserved	E	<2	<2	5.2	Y	Absent		TPHOS-4500(28)
L2118225-04I	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-04J	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-04K	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-04L	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-04M	Plastic 500ml unpreserved	E	7	7	5.2	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118225-05A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-05A1	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-05A2	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-05B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-05B1	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-05B2	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-05C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-05C1	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-05C2	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-05D	Plastic 120ml unpreserved	D	7	7	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-05D1	Plastic 120ml unpreserved	D	7	7	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-05D2	Plastic 120ml unpreserved	D	7	7	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-05E	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-05E1	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-05E2	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-05F	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-05F1	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-05F2	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-05G	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-05G1	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-05G2	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-05H	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-05H1	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-05H2	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-06A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-06B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-06C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-06D	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-06E	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-06F	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-06G	Plastic 250ml unpreserved/No Headspace	E	NA		5.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118225-06H	Plastic 250ml H2SO4 preserved	E	<2	<2	5.2	Y	Absent		TPHOS-4500(28)
L2118225-06I	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-06J	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-06K	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-06L	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-06M	Plastic 500ml unpreserved	E	7	7	5.2	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2118225-07A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-07B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-07C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-07D	Plastic 120ml unpreserved	D	7	7	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-07E	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-07F	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-07G	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-07H	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-08A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-08B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-08C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-08D	Plastic 120ml unpreserved	E	7	7	5.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-08E	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-08F	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-08G	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-08H	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-09A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-09B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-09C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-09D	Plastic 120ml unpreserved	E	7	7	5.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-09E	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-09F	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-09G	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-09H	Amber 250ml unpreserved	E	7	7	5.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-09I	Plastic 250ml unpreserved	E	NA		5.2	Y	Absent		A2-537-ISOTOPE-36(14)
L2118225-09J	Plastic 250ml unpreserved	E	NA		5.2	Y	Absent		A2-537-ISOTOPE-36(14)
L2118225-10A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-10B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-10C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-10D	Plastic 120ml unpreserved	D	7	7	5.5	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-10E	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-10F	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-10G	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-10H	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-11A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-11B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-11C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-11D	Plastic 120ml unpreserved	B	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-11E	Plastic 250ml unpreserved	B	7	7	3.7	Y	Absent		SO4-300(28),F-300(28),CL-300(28),HOLD-WETCHEM()
L2118225-11F	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-11G	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-11H	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-11I	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-12A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-12B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-12C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-12D	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-12E	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-12F	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-12G	Plastic 250ml unpreserved/No Headspace	D	NA		5.5	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118225-12H	Plastic 250ml H2SO4 preserved	D	<2	<2	5.5	Y	Absent		TPHOS-4500(28)
L2118225-12I	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-12J	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-12K	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-12L	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-12M	Plastic 500ml unpreserved	D	7	7	5.5	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118225-12N	Plastic 250ml unpreserved	E	NA		5.2	Y	Absent		A2-537-ISOTOPE-36(14)
L2118225-12O	Plastic 250ml unpreserved	E	NA		5.2	Y	Absent		A2-537-ISOTOPE-36(14)
L2118225-13A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-13B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-13C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-13D	Plastic 120ml unpreserved	B	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-13E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-13F	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-13G	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-13H	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-14A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-14B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-14C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-14D	Plastic 120ml unpreserved	B	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-14E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-14F	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-14G	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-14H	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-15A	Plastic 250ml unpreserved	E	NA		5.2	Y	Absent		A2-537-ISOTOPE-36(14)
L2118225-16A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-16B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-16C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-16D	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-16E	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-16F	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-16G	Plastic 120ml unpreserved	D	7	7	5.5	Y	Absent		OPHOS-4500(2),SO4-300(28),HOLD-WETCHEM(),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2118225-16H	Plastic 250ml unpreserved/No Headspace	D	NA		5.5	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118225-16I	Plastic 250ml unpreserved	D	7	7	5.5	Y	Absent		OPHOS-4500(2),SO4-300(28),HOLD-WETCHEM(),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2118225-16J	Plastic 250ml H2SO4 preserved	D	<2	<2	5.5	Y	Absent		TPHOS-4500(28)
L2118225-16K	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-16L	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-16M	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-16N	Amber 250ml unpreserved	D	7	7	5.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-16O	Plastic 250ml unpreserved	E	NA		5.2	Y	Absent		A2-537-ISOTOPE-36(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-16P	Plastic 250ml unpreserved	E	NA		5.2	Y	Absent		A2-537-ISOTOPE-36(14)
L2118225-17A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-17B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-17C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-17D	Plastic 120ml unpreserved	B	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-17E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-17F	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-17G	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-17H	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-18A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-18B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-18C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-18D	Plastic 120ml unpreserved	B	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-18E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-18F	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-18G	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-18H	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-19A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-19B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-19C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-19D	Plastic 120ml unpreserved	B	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-19E	Plastic 250ml unpreserved	B	7	7	3.7	Y	Absent		SO4-300(28),F-300(28),CL-300(28)
L2118225-19F	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-19G	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-19H	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-19I	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-20A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-20B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-20C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-20D	Plastic 120ml unpreserved	B	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-20E	Plastic 250ml unpreserved	B	7	7	3.7	Y	Absent		SO4-300(28),CL-300(28),F-300(28)
L2118225-20F	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-20G	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-20H	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-20I	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-21A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-21B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-21C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-21D	Plastic 120ml unpreserved	B	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-21E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-21F	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-21G	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-21H	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-22A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-22B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-22C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-22D	Plastic 120ml unpreserved	C	7	7	5.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-22E	Plastic 250ml unpreserved	C	7	7	5.0	Y	Absent		SO4-300(28),CL-300(28),F-300(28)
L2118225-22F	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-22G	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-22H	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-22I	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-23A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-23B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-23C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-23D	Plastic 120ml unpreserved	C	7	7	5.0	Y	Absent		NO2-353(2),NO3-353(2)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-23E	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-23F	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-23G	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-23H	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-24A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-24B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-24C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-24D	Plastic 120ml unpreserved	C	7	7	5.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-24E	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-24F	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-24G	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-24H	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-25A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-25B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-25C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-25D	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-25E	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-25F	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		DOC-9060(28)
L2118225-25G	Plastic 250ml unpreserved/No Headspace	C	NA		5.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118225-25H	Plastic 250ml H2SO4 preserved	C	<2	<2	5.0	Y	Absent		TPHOS-4500(28)
L2118225-25I	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-25J	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-25K	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-25L	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-25M	Plastic 500ml unpreserved	C	7	7	5.0	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2118225-26A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-26B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-26C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118225
Report Date: 04/26/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118225-26D	Plastic 120ml unpreserved	C	7	7	5.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-26E	Plastic 250ml unpreserved	C	7	7	5.0	Y	Absent		SO4-300(28),CL-300(28),F-300(28),HOLD-WETCHEM()
L2118225-26F	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-26G	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-26H	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-26I	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-27A	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-27B	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-27C	Vial HCl preserved	A	NA		3.9	Y	Absent		MCP-8260-10(14)
L2118225-27D	Plastic 120ml unpreserved	C	7	7	5.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118225-27E	Plastic 250ml unpreserved	C	7	7	5.0	Y	Absent		SO4-300(28),CL-300(28),F-300(28)
L2118225-27F	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-27G	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118225-27H	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118225-27I	Amber 250ml unpreserved	C	7	7	5.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name: NUCLEAR METALS **Lab Number:** L2118225

Project Number: 3252H **Report Date:** 04/26/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: *DU Report with 'J' Qualifiers*

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118225
Project Number:	3252H	**Report Date:**	04/26/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF COUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/9/21

ALPHA Job #: L2118225

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING

Filtration

☒ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
18225-01	SW-1-04082021	4/8/2021	17:30	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-02	Trip Blank1-04092021	3/30/202	–	TB	PC	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		2
-03	PT-11P-04092021	4/9/2021	9:30	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-04	GZW-7S-04092021	4/9/2021	9:45	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-05	MW-S40-04092021	4/9/2021	10:00	GW	SRB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	MS/MSD	24
-06	HA20-CMT-2I-04092021	4/9/2021	10:00	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-07	MW-S18-04092021	4/9/2021	10:00	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-08	MW-S04-04092021	4/9/2021	10:30	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-09	EW-1-04092021	4/9/2021	10:35	GW	SMH	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☒	☐		10
-10	MW-S20-04092021	4/9/2021	11:50	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I)
(rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible signature]	4/9/21 17:30	Rob Maerto AAL	4/9/21 1730
Rob Maerto	4-9-21 1830	[illegible signature]	4/9/21 1830

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

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PAGE 2 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/9/21

ALPHA Job #: L2118225

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
18225-11	MW-SD38-04092021	4/9/2021	10:15	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		10
-12	GZW-7-1-04092021	4/9/2021	12:00	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-13	MW-BS38-04092021	4/9/2021	12:55	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-14	MW-BS40-04092021	4/9/2021	13:00	GW	SRB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-15	Field Blank1-04092021	4/9/2021	14:20	FB	NH	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐		2
-16	EQ Blank1-04092021	4/9/2021	14:30	EB	NH	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
-17	MW-BS04-04092021	4/9/2021	13:20	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-18	MW-SD40-04092021	4/9/2021	14:40	GW	SRB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-19	MW-2-04092021	4/9/2021	14:15	GW	PB	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
-20	MW-2-04092021DUP	4/9/2021	14:25	GW	PB	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 8-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/9/21 17:30	Rob Mac... AAL	4/9/21 1730
Rob Mac...	4.9.21 1830	[signature]	4/9/21 1830

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF COUSTODY

PAGE 3 OF 3

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193

Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/9/21

ALPHA Job #: L2118225

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program	Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING

Filtration

☒ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
18225-21	MW-SD41-04092021	4/9/2021	13:20	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-22	ML-3-3-04092021	4/9/2021	15:00	GW	GKW	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
-23	GZW-8-2-04092021	4/9/2021	16:00	GW	GKW	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-24	MW-S23-04092021	4/9/2021	15:55	GW	ZM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-25	HA20-CMT-3S-04092021	4/9/2021	14:40	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-26	MW-SD35-04092021	4/9/2021	15:40	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
-27	MW-BS35-04092021	4/9/2021	13:15	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

Container Type	V	A	A	P	P	P	V	P	P	P	-	-
Preservative	B	A	A	A	D	A	D	A	A	O	-	-

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/9/21 17:30	Rob Maurto AAL	4/9/21 1730
Rob Maurto	4/9/21 1830	[signature]	4/9/21 1830

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 5-JAN-12)

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118225**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487778-5**	**Lab File ID**	**: J210418A05**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/18/21 04:39**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487778-3LCS	WG1487778-3	04/18/21 03:17
WG1487778-4LCSD	WG1487778-4	04/18/21 03:58
TRIP BLANK1-04092021	L2118225-02	04/18/21 07:24

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118225**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1489380-5**	**Lab File ID**	**: J210422A05**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/22/21 05:33**

Client Sample No.	Lab Sample ID	Analysis Date
WG1489380-3LCS	WG1489380-3	04/22/21 04:09
WG1489380-4LCSD	WG1489380-4	04/22/21 04:51
EQ BLANK1-04092021	L2118225-16	04/22/21 06:16
HA20-CMT-2I-04092021	L2118225-06	04/22/21 06:58
SW-1-04082021	L2118225-01	04/22/21 07:40
GZW-7S-04092021	L2118225-04	04/22/21 08:21
EW-1-04092021	L2118225-09	04/22/21 09:02
MW-SD38-04092021	L2118225-11	04/22/21 09:43
MW-BS38-04092021	L2118225-13	04/22/21 10:25
MW-BS04-04092021	L2118225-17	04/22/21 11:06
MW-S04-04092021	L2118225-08	04/22/21 11:47
MW-2-04092021DUP	L2118225-20	04/22/21 12:28
ML-3-3-04092021	L2118225-22	04/22/21 13:09
MW-S23-04092021	L2118225-24	04/22/21 13:50
MW-BS35-04092021	L2118225-27	04/22/21 14:31

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118225**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1489718-5**	**Lab File ID**	**: J210422A06**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/22/21 05:55**

Client Sample No.	Lab Sample ID	Analysis Date
WG1489718-3LCS	WG1489718-3	04/22/21 04:30
WG1489718-4LCSD	WG1489718-4	04/22/21 05:12
MW-S40-04092021	L2118225-05	04/22/21 06:37
HA20-CMT-3S-04092021	L2118225-25	04/22/21 07:19
PT-11P-04092021	L2118225-03	04/22/21 08:00
MW-S18-04092021	L2118225-07	04/22/21 08:41
MW-S20-04092021	L2118225-10	04/22/21 09:23
GZW-7-1-04092021	L2118225-12	04/22/21 10:04
MW-BS40-04092021	L2118225-14	04/22/21 10:45
MW-SD40-04092021	L2118225-18	04/22/21 11:26
MW-2-04092021	L2118225-19	04/22/21 12:07
MW-SD41-04092021	L2118225-21	04/22/21 12:48
MW-SD35-04092021	L2118225-26	04/22/21 14:10
MW-S40-04092021MS	WG1489718-6	04/22/21 14:51
MW-S40-04092021MSD	WG1489718-7	04/22/21 15:32

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118225**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1489835-5**	**Lab File ID**	**: VQ210423A04**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/23/21 06:11**

Client Sample No.	Lab Sample ID	Analysis Date
WG1489835-3LCS	WG1489835-3	04/23/21 04:40
WG1489835-4LCSD	WG1489835-4	04/23/21 05:10
GZW-8-2-04092021	L2118225-23	04/23/21 11:11

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118225**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Instrument ID	**: JACK**	**Calibration Date**	**: 04/18/21 03:17**
Lab File ID	**: J210418A01**	**Init. Calib. Date(s)**	**: 04/06/21 04/06/21**
Sample No	**: WG1487778-2**	**Init. Calib. Times**	**: 06:51 15:03**
Channel	**:**		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	74	0
Dichlorodifluoromethane	1.063	1.159	-	-9	20	73	0
Chloromethane	1.777	2.314	-	-30.2*	20	83	0
Vinyl chloride	2.131	2.369	-	-11.2	20	72	0
Bromomethane	10	9.598	-	4	20	64	0
Chloroethane	1.132	1.421	-	-25.5*	20	78	0
Trichlorofluoromethane	1.963	2.217	-	-12.9	20	76	0
Ethyl ether	0.811	0.866	-	-6.8	20	74	0
1,1-Dichloroethene	1.225	1.325	-	-8.2	20	74	0
Carbon disulfide	4.134	4.812	-	-16.4	20	78	0
Freon-113	1.249	1.442	-	-15.5	20	79	0
Acrolein	0.195	0.212	-	-8.7	20	74	0
Methylene chloride	1.42	1.701	-	-19.8	20	80	0
Acetone	0.421	0.582	-	-38.2*	20	92	0
trans-1,2-Dichloroethene	1.295	1.433	-	-10.7	20	77	0
Methyl acetate	1.123	1.488	-	-32.5*	20	94	0
Methyl tert-butyl ether	3.731	3.748	-	-0.5	20	75	0
tert-Butyl alcohol	0.112	0.127	-	-13.4	20	89	0
Diisopropyl ether	5.416	6.354	-	-17.3	20	83	0
1,1-Dichloroethane	3.15	3.865	-	-22.7*	20	81	0
Halothane	0.935	1.076	-	-15.1	20	80	0
Acrylonitrile	0.54	0.69	-	-27.8*	20	85	0
Ethyl tert-butyl ether	4.546	4.837	-	-6.4	20	79	0
Vinyl acetate	3.97	4.528	-	-14.1	20	85	0
cis-1,2-Dichloroethene	1.495	1.634	-	-9.3	20	75	0
2,2-Dichloropropane	2.269	2.607	-	-14.9	20	82	0
Bromochloromethane	0.579	0.664	-	-14.7	20	81	0
Cyclohexane	3.039	3.58	-	-17.8	20	79	0
Chloroform	2.689	3.062	-	-13.9	20	78	0
Ethyl acetate	1.446	1.759	-	-21.6*	20	91	0
Carbon tetrachloride	1.62	1.835	-	-13.3	20	78	0
Tetrahydrofuran	0.434	0.549	-	-26.5*	20	83	0
Dibromofluoromethane	0.243	0.249	-	-2.5	20	78	0
1,1,1-Trichloroethane	2.087	2.306	-	-10.5	20	76	0
2-Butanone	0.63	0.791	-	-25.6*	20	92	0
1,1-Dichloropropene	2.06	2.23	-	-8.3	20	74	0
Benzene	6.094	6.81	-	-11.7	20	79	0
tert-Amyl methyl ether	3.752	3.554	-	5.3	20	71	0
1,2-Dichloroethane-d4	0.4	0.415	-	-3.7	20	77	0
1,2-Dichloroethane	2.172	2.549	-	-17.4	20	80	0
Methyl cyclohexane	2.718	2.852	-	-4.9	20	74	0
Trichloroethene	1.386	1.515	-	-9.3	20	77	0
Dibromomethane	0.835	0.916	-	-9.7	20	78	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118225
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/18/21 03:17
Lab File ID	: J210418A01	Init. Calib. Date(s)	: 04/06/21 04/06/21
Sample No	: WG1487778-2	Init. Calib. Times	: 06:51 15:03
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	1.734	1.948	-	-12.3	20	79	0
2-Chloroethyl vinyl ether	0.93	0.82	-	11.8	20	65	0
Bromodichloromethane	2.051	2.265	-	-10.4	20	78	0
1,4-Dioxane	0.011	0.012*	-	-9.1	20	81	0
cis-1,3-Dichloropropene	2.48	2.694	-	-8.6	20	78	0
Chlorobenzene-d5	1	1	-	0	20	69	0
Toluene-d8	1.295	1.323	-	-2.2	20	68	0
Toluene	4.665	5.107	-	-9.5	20	72	0
4-Methyl-2-pentanone	0.633	0.65	-	-2.7	20	75	0
Tetrachloroethene	1.509	1.705	-	-13	20	83	0
trans-1,3-Dichloropropene	2.822	3.297	-	-16.8	20	78	0
Ethyl methacrylate	2.319	2.27	-	2.1	20	67	0
1,1,2-Trichloroethane	1.359	1.571	-	-15.6	20	79	0
Chlorodibromomethane	1.446	1.617	-	-11.8	20	81	0
1,3-Dichloropropane	2.89	3.358	-	-16.2	20	80	0
1,2-Dibromoethane	1.36	1.532	-	-12.6	20	80	0
2-Hexanone	1.159	1.328	-	-14.6	20	77	0
Chlorobenzene	4.762	5.231	-	-9.8	20	75	0
Ethylbenzene	9.087	10.254	-	-12.8	20	72	0
1,1,1,2-Tetrachloroethane	1.447	1.615	-	-11.6	20	80	0
p/m Xylene	3.498	3.924	-	-12.2	20	73	0
o Xylene	3.305	3.664	-	-10.9	20	71	0
Styrene	5.661	6.569	-	-16	20	74	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	78	0
Bromoform	10	9.159	-	8.4	20	84	0
Isopropylbenzene	17.237	16.407	-	4.8	20	71	0
4-Bromofluorobenzene	1.006	0.864	-	14.1	20	68	0
Bromobenzene	3.515	3.403	-	3.2	20	84	0
n-Propylbenzene	23.158	23.88	-	-3.1	20	75	0
1,4-Dichlorobutane	6.223	6.886	-	-10.7	20	81	0
1,1,2,2-Tetrachloroethane	10	11.243	-	-12.4	20	82	0
4-Ethyltoluene	16.64	16.762	-	-0.7	20	75	0
2-Chlorotoluene	15.112	15.412	-	-2	20	75	0
1,3,5-Trimethylbenzene	14.217	14.283	-	-0.5	20	76	0
1,2,3-Trichloropropane	3.239	3.511	-	-8.4	20	79	0
trans-1,4-Dichloro-2-buten	1.298	1.46	-	-12.5	20	78	0
4-Chlorotoluene	13.612	13.677	-	-0.5	20	74	0
tert-Butylbenzene	11.914	11.664	-	2.1	20	74	0
1,2,4-Trimethylbenzene	13.724	13.66	-	0.5	20	76	0
sec-Butylbenzene	17.277	17.662	-	-2.2	20	74	0
p-Isopropyltoluene	14.39	14.572	-	-1.3	20	75	0
1,3-Dichlorobenzene	7.305	7.394	-	-1.2	20	79	0
1,4-Dichlorobenzene	7.308	7.349	-	-0.6	20	81	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118225**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Instrument ID	**: JACK**	**Calibration Date**	**: 04/18/21 03:17**
Lab File ID	**: J210418A01**	**Init. Calib. Date(s)**	**: 04/06/21 04/06/21**
Sample No	**: WG1487778-2**	**Init. Calib. Times**	**: 06:51 15:03**
Channel	**:**		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	8.273	8.13	-	1.7	20	76	0
n-Butylbenzene	14.883	15.819	-	-6.3	20	78	0
1,2-Dichlorobenzene	6.648	6.68	-	-0.5	20	80	0
1,2,4,5-Tetramethylbenzene	10.716	9.35	-	12.7	20	73	0
1,2-Dibromo-3-chloropropan	0.466	0.457	-	1.9	20	84	0
1,3,5-Trichlorobenzene	4.04	4.158	-	-2.9	20	91	0
Hexachlorobutadiene	10	11.321	-	-13.2	20	94	0
1,2,4-Trichlorobenzene	10	10.103	-	-1	20	84	0
Naphthalene	8.515	8.186	-	3.9	20	80	0
1,2,3-Trichlorobenzene	2.936	3.001	-	-2.2	20	89	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118225**	
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**	
Instrument ID	**: JACK**	**Calibration Date**	**: 04/22/21 04:09**	
Lab File ID	**: J210422A01**	**Init. Calib. Date(s)**	**: 04/20/21**	**04/20/21**
Sample No	**: WG1489380-2**	**Init. Calib. Times**	**: 06:07**	**12:57**
Channel	**:**			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	113	0
Dichlorodifluoromethane	1.542	1.451	-	5.9	20	94	0
Chloromethane	2.252	2.083	-	7.5	20	99	0
Vinyl chloride	1.971	1.793	-	9	20	92	0
Bromomethane	10	8.46	-	15.4	20	90	0
Chloroethane	1.198	1.122	-	6.3	20	96	0
Trichlorofluoromethane	2.788	2.57	-	7.8	20	94	0
Ethyl ether	0.889	0.877	-	1.3	20	108	0
1,1-Dichloroethene	1.608	1.392	-	13.4	20	91	0
Carbon disulfide	4.761	4.37	-	8.2	20	96	0
Freon-113	1.7	1.528	-	10.1	20	93	0
Iodomethane	10	9.503	-	5	20	135	0
Acrolein	0.207	0.242	-	-16.9	20	136	0
Methylene chloride	1.728	1.614	-	6.6	20	99	0
Acetone	0.545	0.649	-	-19.1	20	131	0
trans-1,2-Dichloroethene	1.648	1.481	-	10.1	20	96	0
Methyl acetate	1.373	1.444	-	-5.2	20	114	0
Methyl tert-butyl ether	4.021	4.122	-	-2.5	20	118	0
tert-Butyl alcohol	0.114	0.149	-	-30.7*	20	149	0
Diisopropyl ether	6.261	5.906	-	5.7	20	107	0
1,1-Dichloroethane	3.488	3.136	-	10.1	20	94	0
Halothane	1.371	1.255	-	8.5	20	96	-.01
Acrylonitrile	0.624	0.69	-	-10.6	20	119	0
Ethyl tert-butyl ether	4.857	4.694	-	3.4	20	109	0
Vinyl acetate	4.497	4.588	-	-2	20	122	0
cis-1,2-Dichloroethene	1.889	1.73	-	8.4	20	98	0
2,2-Dichloropropane	2.736	2.54	-	7.2	20	103	0
Bromochloromethane	0.897	0.813	-	9.4	20	96	0
Cyclohexane	3.267	3.068	-	6.1	20	95	0
Chloroform	3.289	2.959	-	10	20	93	0
Ethyl acetate	1.775	1.933	-	-8.9	20	125	0
Carbon tetrachloride	2.644	2.3	-	13	20	93	0
Tetrahydrofuran	0.539	0.653	-	-21.2*	20	131	0
Dibromofluoromethane	0.29	0.268	-	7.6	20	111	0
1,1,1-Trichloroethane	2.893	2.591	-	10.4	20	96	0
2-Butanone	0.765	0.861	-	-12.5	20	123	0
1,1-Dichloropropene	2.301	2.108	-	8.4	20	97	0
Benzene	6.631	6.171	-	6.9	20	101	0
tert-Amyl methyl ether	3.944	3.833	-	2.8	20	114	0
1,2-Dichloroethane-d4	0.391	0.35	-	10.5	20	108	0
1,2-Dichloroethane	2.572	2.368	-	7.9	20	101	0
Methyl cyclohexane	3.073	2.803	-	8.8	20	101	0
Trichloroethene	1.748	1.611	-	7.8	20	98	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118225	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/22/21 04:09	
Lab File ID	: J210422A01	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1489380-2	Init. Calib. Times	: 06:07	12:57
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	1.104	1.013	-	8.2	20	102	0
1,2-Dichloropropane	1.79	1.618	-	9.6	20	101	0
2-Chloroethyl vinyl ether	0.967	0.848	-	12.3	20	112	0
Bromodichloromethane	2.457	2.186	-	11	20	96	0
1,4-Dioxane	0.012	0.016*	-	-33.3*	20	152	0
cis-1,3-Dichloropropene	2.784	2.624	-	5.7	20	103	0
Chlorobenzene-d5	1	1	-	0	20	109	0
Toluene-d8	1.15	1.212	-	-5.4	20	113	0
Toluene	4.965	4.602	-	7.3	20	96	0
4-Methyl-2-pentanone	0.596	0.63	-	-5.7	20	122	0
Tetrachloroethene	2.321	2.206	-	5	20	99	0
trans-1,3-Dichloropropene	10	9.684	-	3.2	20	105	0
Ethyl methacrylate	2.129	2.11	-	0.9	20	103	0
1,1,2-Trichloroethane	1.356	1.356	-	0	20	107	0
Chlorodibromomethane	1.961	1.875	-	4.4	20	103	0
1,3-Dichloropropane	2.782	2.811	-	-1	20	107	0
1,2-Dibromoethane	1.63	1.633	-	-0.2	20	107	0
2-Hexanone	1.263	1.328	-	-5.1	20	114	0
Chlorobenzene	5.757	5.394	-	6.3	20	99	0
Ethylbenzene	9.387	9.111	-	2.9	20	94	0
1,1,1,2-Tetrachloroethane	1.992	1.89	-	5.1	20	104	0
p/m Xylene	3.789	3.636	-	4	20	91	0
o Xylene	3.595	3.49	-	2.9	20	94	0
Styrene	20	18.528	-	7.4	20	92	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	105	0
Bromoform	2.359	2.234	-	5.3	20	109	0
Isopropylbenzene	17.473	15.726	-	10	20	92	0
4-Bromofluorobenzene	0.8	0.797	-	0.4	20	108	0
Bromobenzene	4.366	3.96	-	9.3	20	98	0
n-Propylbenzene	21.642	20.04	-	7.4	20	91	0
1,4-Dichlorobutane	5.544	5.534	-	0.2	20	104	0
1,1,2,2-Tetrachloroethane	3.387	3.307	-	2.4	20	105	0
4-Ethyltoluene	16.921	16.088	-	4.9	20	95	0
2-Chlorotoluene	14.23	13.187	-	7.3	20	91	0
1,3,5-Trimethylbenzene	14.552	13.564	-	6.8	20	94	0
1,2,3-Trichloropropane	3.058	3.021	-	1.2	20	107	0
trans-1,4-Dichloro-2-buten	1.252	1.247	-	0.4	20	102	0
4-Chlorotoluene	13.04	11.996	-	8	20	94	0
tert-Butylbenzene	12.872	12.035	-	6.5	20	93	0
1,2,4-Trimethylbenzene	13.954	13.16	-	5.7	20	96	0
sec-Butylbenzene	17.612	16.769	-	4.8	20	94	0
p-Isopropyltoluene	10	9.171	-	8.3	20	96	0
1,3-Dichlorobenzene	8.882	8.269	-	6.9	20	96	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118225**	
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**	
Instrument ID	**: JACK**	**Calibration Date**	**: 04/22/21 04:09**	
Lab File ID	**: J210422A01**	**Init. Calib. Date(s)**	**: 04/20/21**	**04/20/21**
Sample No	**: WG1489380-2**	**Init. Calib. Times**	**: 06:07**	**12:57**
Channel	**:**			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	8.812	8.247	-	6.4	20	97	0
p-Diethylbenzene	9.399	8.802	-	6.4	20	101	0
n-Butylbenzene	14.08	14.002	-	0.6	20	99	0
1,2-Dichlorobenzene	8.245	7.697	-	6.6	20	99	0
1,2,4,5-Tetramethylbenzene	10	9.157	-	8.4	20	105	0
1,2-Dibromo-3-chloropropan	0.605	0.648	-	-7.1	20	113	0
1,3,5-Trichlorobenzene	5.579	5.503	-	1.4	20	107	0
Hexachlorobutadiene	2.239	2.361	-	-5.4	20	109	0
1,2,4-Trichlorobenzene	4.502	4.395	-	2.4	20	109	0
Naphthalene	10.045	10.026	-	0.2	20	115	0
1,2,3-Trichlorobenzene	4.247	4.094	-	3.6	20	107	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118225	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/22/21 04:30	
Lab File ID	: J210422A02	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1489718-2	Init. Calib. Times	: 06:28	13:17
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	104	0
Dichlorodifluoromethane	1.718	1.465	-	14.7	20	89	0
Chloromethane	2.239	2.132	-	4.8	20	100	0
Vinyl chloride	2.099	1.819	-	13.3	20	90	0
Bromomethane	10	8.359	-	16.4	20	82	0
Chloroethane	1.236	1.14	-	7.8	20	96	-.01
Trichlorofluoromethane	2.886	2.66	-	7.8	20	94	0
Ethyl ether	0.988	0.921	-	6.8	20	103	0
1,1-Dichloroethene	1.62	1.569	-	3.1	20	100	0
Carbon disulfide	4.976	4.522	-	9.1	20	97	0
Freon-113	1.756	1.678	-	4.4	20	97	0
Iodomethane	10	9.378	-	6.2	20	131	0
Acrolein	0.256	0.258	-	-0.8	20	114	-.01
Methylene chloride	1.895	1.742	-	8.1	20	102	0
Acetone	10	10.238	-	-2.4	20	113	-.01
trans-1,2-Dichloroethene	1.744	1.629	-	6.6	20	101	-.01
Methyl acetate	1.686	1.717	-	-1.8	20	115	0
Methyl tert-butyl ether	4.666	4.59	-	1.6	20	109	0
tert-Butyl alcohol	0.162	0.185	-	-14.2	20	135	0
Diisopropyl ether	7.013	6.528	-	6.9	20	104	0
1,1-Dichloroethane	3.687	3.379	-	8.4	20	97	0
Halothane	1.455	1.342	-	7.8	20	98	0
Acrylonitrile	0.743	0.775	-	-4.3	20	114	0
Ethyl tert-butyl ether	5.545	5.214	-	6	20	107	0
Vinyl acetate	5.398	5.231	-	3.1	20	110	0
cis-1,2-Dichloroethene	1.984	1.855	-	6.5	20	99	0
2,2-Dichloropropane	2.857	2.708	-	5.2	20	103	0
Bromochloromethane	0.938	0.872	-	7	20	98	0
Cyclohexane	3.438	3.272	-	4.8	20	97	0
Chloroform	3.496	3.04	-	13	20	98	0
Ethyl acetate	2.26	2.338	-	-3.5	20	117	0
Carbon tetrachloride	2.608	2.539	-	2.6	20	99	0
Tetrahydrofuran	0.702	0.755	-	-7.5	20	121	-.01
Dibromofluoromethane	0.274	0.258	-	5.8	20	100	0
1,1,1-Trichloroethane	3.004	2.812	-	6.4	20	99	0
2-Butanone	1.019	1.076	-	-5.6	20	122	0
1,1-Dichloropropene	2.493	2.389	-	4.2	20	100	0
Benzene	7.147	6.664	-	6.8	20	99	0
tert-Amyl methyl ether	4.722	4.33	-	8.3	20	110	0
1,2-Dichloroethane-d4	0.39	0.328	-	15.9	20	94	0
1,2-Dichloroethane	2.743	2.515	-	8.3	20	101	0
Methyl cyclohexane	3.393	3.079	-	9.3	20	97	0
Trichloroethene	1.946	1.808	-	7.1	20	99	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118225	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/22/21 04:30	
Lab File ID	: J210422A02	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1489718-2	Init. Calib. Times	: 06:28	13:17
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	1.192	1.08	-	9.4	20	101	0
1,2-Dichloropropane	1.988	1.811	-	8.9	20	102	0
2-Chloroethyl vinyl ether	10	8.831	-	11.7	20	107	0
Bromodichloromethane	2.635	2.408	-	8.6	20	100	0
1,4-Dioxane	0.018	0.018*	-	0	20	112	-.01
cis-1,3-Dichloropropene	3.055	2.947	-	3.5	20	104	0
Chlorobenzene-d5	1	1	-	0	20	105	0
Toluene-d8	1.158	1.174	-	-1.4	20	104	0
Toluene	5.622	4.975	-	11.5	20	98	0
4-Methyl-2-pentanone	10	9.932	-	0.7	20	118	0
Tetrachloroethene	2.601	2.4	-	7.7	20	99	0
trans-1,3-Dichloropropene	3.254	3.246	-	0.2	20	106	0
Ethyl methacrylate	2.644	2.528	-	4.4	20	109	0
1,1,2-Trichloroethane	1.582	1.517	-	4.1	20	102	0
Chlorodibromomethane	2.288	2.117	-	7.5	20	104	0
1,3-Dichloropropane	3.34	3.144	-	5.9	20	103	0
1,2-Dibromoethane	1.93	1.846	-	4.4	20	105	0
2-Hexanone	1.669	1.665	-	0.2	20	118	0
Chlorobenzene	6.368	5.84	-	8.3	20	98	0
Ethylbenzene	10.067	10.074	-	-0.1	20	99	0
1,1,1,2-Tetrachloroethane	2.308	2.138	-	7.4	20	102	0
p/m Xylene	4.037	4.009	-	0.7	20	98	0
o Xylene	20	18.308	-	8.5	20	98	0
Styrene	20	18.77	-	6.2	20	98	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	104	0
Bromoform	2.777	2.541	-	8.5	20	105	0
Isopropylbenzene	18.605	17.25	-	7.3	20	98	0
4-Bromofluorobenzene	0.806	0.779	-	3.3	20	102	0
Bromobenzene	4.765	4.302	-	9.7	20	101	0
n-Propylbenzene	22.882	21.308	-	6.9	20	97	0
1,4-Dichlorobutane	6.578	6.019	-	8.5	20	103	0
1,1,2,2-Tetrachloroethane	10	9.677	-	3.2	20	103	0
4-Ethyltoluene	17.854	16.925	-	5.2	20	99	0
2-Chlorotoluene	15.287	14.034	-	8.2	20	98	0
1,3,5-Trimethylbenzene	15.64	14.472	-	7.5	20	97	0
1,2,3-Trichloropropane	3.625	3.371	-	7	20	102	0
trans-1,4-Dichloro-2-buten	1.546	1.263	-	18.3	20	93	0
4-Chlorotoluene	13.902	12.733	-	8.4	20	100	0
tert-Butylbenzene	13.881	12.803	-	7.8	20	97	0
1,2,4-Trimethylbenzene	15.244	14.291	-	6.3	20	100	0
sec-Butylbenzene	18.87	17.719	-	6.1	20	98	0
p-Isopropyltoluene	10	8.884	-	11.2	20	99	0
1,3-Dichlorobenzene	9.524	8.872	-	6.8	20	102	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118225	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/22/21 04:30	
Lab File ID	: J210422A02	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1489718-2	Init. Calib. Times	: 06:28	13:17
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	9.417	8.602	-	8.7	20	102	0
p-Diethylbenzene	10.288	9.257	-	10	20	101	0
n-Butylbenzene	15.665	14.826	-	5.4	20	98	0
1,2-Dichlorobenzene	8.844	8.113	-	8.3	20	104	0
1,2,4,5-Tetramethylbenzene	10	8.526	-	14.7	20	104	0
1,2-Dibromo-3-chloropropan	0.769	0.778	-	-1.2	20	115	0
1,3,5-Trichlorobenzene	6.153	5.948	-	3.3	20	107	0
Hexachlorobutadiene	2.422	2.312	-	4.5	20	105	0
1,2,4-Trichlorobenzene	5.391	4.979	-	7.6	20	106	0
Naphthalene	10	9.045	-	9.6	20	109	0
1,2,3-Trichlorobenzene	5.031	4.782	-	4.9	20	107	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2118225
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Instrument ID	: QUIMBY	**Calibration Date**	: 04/23/21 04:40
Lab File ID	: VQ210423A01	**Init. Calib. Date(s)**	: 04/11/21 04/11/21
Sample No	: WG1489835-2	**Init. Calib. Times**	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	63	0
Dichlorodifluoromethane	0.715	0.807	-	-12.9	20	65	0
Chloromethane	1.089	1.084	-	0.5	20	59	0
Vinyl chloride	0.844	0.732	-	13.3	20	50	0
Bromomethane	0.461	0.51	-	-10.6	20	66	0
Chloroethane	0.521	0.42	-	19.4	20	47	0
Trichlorofluoromethane	1.198	1.427	-	-19.1	20	70	0
Ethyl ether	0.275	0.24	-	12.7	20	53	0
1,1-Dichloroethene	0.654	0.614	-	6.1	20	56	0
Carbon disulfide	1.842	1.533	-	16.8	20	50	0
Methylene chloride	0.709	0.67	-	5.5	20	56	0
Acetone	10	11.456	-	-14.6	20	72	0
trans-1,2-Dichloroethene	0.781	0.736	-	5.8	20	56	0
Methyl tert-butyl ether	1.417	1.518	-	-7.1	20	67	0
Diisopropyl ether	2.883	3.152	-	-9.3	20	67	0
1,1-Dichloroethane	1.547	1.5	-	3	20	58	0
Ethyl tert-butyl ether	2.062	2.195	-	-6.5	20	65	0
cis-1,2-Dichloroethene	0.828	0.814	-	1.7	20	59	0
2,2-Dichloropropane	1.253	1.462	-	-16.7	20	70	0
Bromochloromethane	0.339	0.389	-	-14.7	20	68	0
Chloroform	1.426	1.434	-	-0.6	20	60	0
Carbon tetrachloride	1.277	1.514	-	-18.6	20	70	0
Tetrahydrofuran	0.171	0.188	-	-9.9	20	69	0
Dibromofluoromethane	0.291	0.308	-	-5.8	20	66	0
1,1,1-Trichloroethane	1.461	1.627	-	-11.4	20	67	0
2-Butanone	0.19	0.212	-	-11.6	20	67	0
1,1-Dichloropropene	1.115	1.102	-	1.2	20	59	0
Benzene	3.027	2.806	-	7.3	20	55	0
tert-Amyl methyl ether	1.521	1.521	-	0	20	62	0
1,2-Dichloroethane-d4	0.282	0.325	-	-15.2	20	75	0
1,2-Dichloroethane	0.858	1.015	-	-18.3	20	72	0
Trichloroethene	0.896	0.86	-	4	20	60	0
Dibromomethane	0.344	0.349	-	-1.5	20	61	-.01
1,2-Dichloropropane	0.753	0.702	-	6.8	20	56	0
Bromodichloromethane	0.987	1.014	-	-2.7	20	62	0
1,4-Dioxane	0.00307	0.00292*	-	4.9	20	59	0
cis-1,3-Dichloropropene	1.059	1.062	-	-0.3	20	61	0
Chlorobenzene-d5	1	1	-	0	20	62	-.01
Toluene-d8	1.077	1.007	-	6.5	20	59	-.01
Toluene	1.629	1.517	-	6.9	20	55	-.01
4-Methyl-2-pentanone	10	8.784	-	12.2	20	61	0
Tetrachloroethene	0.709	0.83	-	-17.1	20	70	0
trans-1,3-Dichloropropene	0.736	0.736	-	0	20	62	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118225	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: QUIMBY	Calibration Date	: 04/23/21 04:40	
Lab File ID	: VQ210423A01	Init. Calib. Date(s)	: 04/11/21	04/11/21
Sample No	: WG1489835-2	Init. Calib. Times	: 16:44	21:47
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.325	0.298	-	8.3	20	56	0
Chlorodibromomethane	0.512	0.563	-	-10	20	68	0
1,3-Dichloropropane	0.692	0.64	-	7.5	20	57	0
1,2-Dibromoethane	0.368	0.376	-	-2.2	20	64	-.01
2-Hexanone	10	9.637	-	3.6	20	68	0
Chlorobenzene	1.757	1.729	-	1.6	20	59	-.01
Ethylbenzene	3.145	3.1	-	1.4	20	56	0
1,1,1,2-Tetrachloroethane	0.626	0.714	-	-14.1	20	69	0
p/m Xylene	20	19.336	-	3.3	20	60	-.01
o Xylene	20	19.484	-	2.6	20	61	-.01
Styrene	20	19.768	-	1.2	20	62	-.01
1,4-Dichlorobenzene-d4	1	1	-	0	20	79	0
Bromoform	0.517	0.491	-	5	20	72	0
Isopropylbenzene	6.172	5.174	-	16.2	20	59	-.01
4-Bromofluorobenzene	0.997	0.773	-	22.5*	20	61	0
Bromobenzene	1.257	1.164	-	7.4	20	69	-.01
n-Propylbenzene	6.845	5.995	-	12.4	20	65	0
1,1,2,2-Tetrachloroethane	0.764	0.567	-	25.8*	20	55	0
2-Chlorotoluene	4.764	4.083	-	14.3	20	64	-.01
1,3,5-Trimethylbenzene	3.876	4.355	-	-12.4	20	85	0
1,2,3-Trichloropropane	0.635	0.505	-	20.5*	20	60	0
4-Chlorotoluene	4.01	3.572	-	10.9	20	67	0
tert-Butylbenzene	4.263	4.169	-	2.2	20	72	0
1,2,4-Trimethylbenzene	3.462	4.104	-	-18.5	20	90	0
sec-Butylbenzene	5.424	5.022	-	7.4	20	69	0
p-Isopropyltoluene	10	10.119	-	-1.2	20	84	0
1,3-Dichlorobenzene	2.441	2.51	-	-2.8	20	77	0
1,4-Dichlorobenzene	2.306	2.459	-	-6.6	20	81	0
n-Butylbenzene	10	10.151	-	-1.5	20	83	0
1,2-Dichlorobenzene	2.108	2.182	-	-3.5	20	77	0
1,2-Dibromo-3-chloropropan	0.11	0.094	-	14.5	20	64	0
Hexachlorobutadiene	0.787	0.756	-	3.9	20	76	0
1,2,4-Trichlorobenzene	0.939	1.154	-	-22.9*	20	99	0
Naphthalene	1.416	1.545	-	-9.1	20	82	0
1,2,3-Trichlorobenzene	0.783	0.989	-	-26.3*	20	93	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L2118447
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	3252H
Report Date:	05/25/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2118447-01	ML-3-1-04122021	WATER	CONCORD, MA	04/12/21 09:20	04/12/21
L2118447-02	MW-S35-04122021	WATER	CONCORD, MA	04/12/21 09:40	04/12/21
L2118447-03	MW-SD37-04122021	WATER	CONCORD, MA	04/12/21 09:55	04/12/21
L2118447-04	HA20-CMT-3I-04122021	WATER	CONCORD, MA	04/12/21 10:00	04/12/21
L2118447-05	MW-BS25-04122021	WATER	CONCORD, MA	04/12/21 10:10	04/12/21
L2118447-06	MW-SD42A-04122021	WATER	CONCORD, MA	04/12/21 10:15	04/12/21
L2118447-07	BEW-2-04122021	WATER	CONCORD, MA	04/12/21 10:30	04/12/21
L2118447-08	TRIP BLANK1-04122021	WATER	CONCORD, MA	04/12/21 00:00	04/12/21
L2118447-09	HA20-CMT-4S-04122021	WATER	CONCORD, MA	04/12/21 11:00	04/12/21
L2118447-10	MW-S09-04122021	WATER	CONCORD, MA	04/12/21 11:25	04/12/21
L2118447-11	MW-SD44-04122021	WATER	CONCORD, MA	04/12/21 12:45	04/12/21
L2118447-12	HA20-CMT-3D2-04122021	WATER	CONCORD, MA	04/12/21 12:40	04/12/21
L2118447-13	MW-BS37-04122021	WATER	CONCORD, MA	04/12/21 13:45	04/12/21
L2118447-14	FIELD BLANK1-04122021	WATER	CONCORD, MA	04/12/21 14:45	04/12/21
L2118447-15	EQ BLANK1-04122021	WATER	CONCORD, MA	04/12/21 15:00	04/12/21
L2118447-16	MW-SD64-04122021	WATER	CONCORD, MA	04/12/21 14:20	04/12/21
L2118447-17	MW-SD10-04122021	WATER	CONCORD, MA	04/12/21 14:20	04/12/21
L2118447-18	MW-SD10-04122021 DUP	WATER	CONCORD, MA	04/12/21 14:25	04/12/21
L2118447-19	P-4-04122021	WATER	CONCORD, MA	04/12/21 15:10	04/12/21
L2118447-20	HA20-CMT-4I-04122021	WATER	CONCORD, MA	04/12/21 15:00	04/12/21
L2118447-21	MW-S03-04122021	WATER	CONCORD, MA	04/12/21 16:00	04/12/21
L2118447-22	MW-S26-04122021	WATER	CONCORD, MA	04/12/21 15:50	04/12/21
L2118447-23	MW-BS26-04122021	WATER	CONCORD, MA	04/12/21 13:20	04/12/21
L2118447-24	MW-SD45-04122021	WATER	CONCORD, MA	04/12/21 15:25	04/12/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2118447-25	MW-S37-04122021	WATER	CONCORD, MA	04/12/21 16:05	04/12/21

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Revision

May 25, 2021: This report includes the results of the Bromide analysis performed on L2118447--01, -04, -07, -12, -15, -16, and -23.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Sample Receipt

L2118447-13: The collection date and time on the chain of custody was 12-APR-21 12:40; however, the collection date/time on the container label was 12-APR-21 13:45. At the client's request, the collection date/time is reported as 12-APR-21 13:45.

Volatile Organics

L2118447-01 through -07, -10 through -13, -15, -16, and -17: Initial calibration utilized a quadratic fit for: n-butylbenzene, p-isopropyltoluene

In reference to question H:

The WG1487779-3/-4 LCS/LCSD recoveries, associated with L2118447-08, are above the individual acceptance criteria for acetone (140%/140%) and tetrahydrofuran (LCSD 140%), but within the overall method allowances. The results of the associated sample are reported; however, all positive detects are considered to have a potentially high bias for these compounds.

The WG1490394-6/-7 MS/MSD RPD, performed on L2118447-24, is outside the acceptance criteria for tetrachloroethene (22%).

L2118447-01 through -07, -10 through -13, -15, -16, and -17: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0025)

Average Response Factor: 1,4-dioxane

Case Narrative (continued)

L2118447-08: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0119)
Average Response Factor: 1,4-dioxane
L2118447-09 and -18 through -25: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0157)
Average Response Factor: 1,4-dioxane
L2118447-01 through -13 and -15 through -25: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

Semivolatile Organics
L2118447-01 through -07, -09 through -13, -22, -23, -24, WG1487517-1, WG1487517-2/-3, and WG1487517-4/-5: The initial calibration utilized a quadratic fit for 2,4,6-tribromophenol and bis(2-ethylhexyl)phthalate.
L2118447-15 through -21, -25, WG1487590-1, and WG1487590-2/-3: The initial calibration utilized a quadratic fit for butyl benzyl phthalate, bis(2-ethylhexyl)phthalate, and di-n-octylphthalate.
In reference to question H:
L2118447-17: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (111%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The WG1487517-2 LCS/LCSD recoveries, associated with L2118447-01 through -07, -09 through -13, -22, -23, and -24, are below the acceptance criteria for aniline (16%/23%) and 4-chloroaniline (37%/31%); however, they have been identified as "difficult" analytes and are within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds. The LCS/LCSD RPD is above the acceptance criteria for aniline (36%).
The WG1487590-2/-3 LCS/LCSD recoveries, associated with L2118447-15 through -21 and -25, are below the acceptance criteria for aniline (29%/30%); however, it has been identified as a "difficult" analyte and is

Case Narrative (continued)

within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1487590-2/-3 LCS/LCSD RPD, associated with L2118447-15 through -21 and -25, is above the acceptance criteria for benzo(k)fluoranthene (23%).

The surrogate recovery for the WG1487590-2 LCS, associated with L2118447-15 through -21 and -25, is outside the individual acceptance criteria for 2,4,6-tribromophenol (126%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1487517-4/-5 MS/MSD recoveries, performed on L2118447-24, are outside the acceptance criteria for aniline (23%/19%) and 4-chloroaniline (28%/25%).

The WG1487517-4/-5 MS/MSD RPDs, performed on L2118447-24, are outside the acceptance criteria for 1,2,4-trichlorobenzene (27%), bis(2-chloroethyl)ether (30%), 1,2-dichlorobenzene (29%), 1,3-dichlorobenzene (30%), 1,4-dichlorobenzene (29%), bis(2-chloroethoxy)methane (28%), nitrobenzene (24%), acetophenone (23%), 2,4,6-trichlorophenol (22%), 2-chlorophenol (26%), 2,4-dichlorophenol (24%), phenol (23%), 2-methylphenol (26%), and 3-methylphenol/4-methylphenol (24%).

Semivolatile Organics by SIM

L2118447-15 through -21, -25, WG1487591-1, and WG1487591-2/-3: The initial calibration utilized a quadratic fit for pentachlorophenol.

In reference to question H:

L2118447-04, -12, and -23: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (143%, 127%, and 154%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1487520-1 Method Blank, associated with L2118447-01 through -07, -09 through -13, -22, -23, and -24, has concentrations above the reporting limits for naphthalene and 2-methylnaphthalene. Since the samples were non-detect to the RL for these target analytes, no further actions were taken. The results of the original analysis are reported.

Case Narrative (continued)

The surrogate recoveries for the WG1487520-2/-3 LCS/LCSD, associated with L2118447-01 through -07, -09 through -13, -22, -23, and -24, are outside the acceptance criteria for 2,4,6-tribromophenol (123%/125%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.
The WG1487591-2/-3 LCS/LCSD RPDs, associated with L2118447-15 through -21 and -25, are above the acceptance criteria for 2-chloronaphthalene (26%), acenaphthylene (24%), and benzo(ghi)perylene (22%).
The WG1487520-4 MS recovery, performed on L2118447-24, is outside the acceptance criteria for pentachlorophenol (140%).
The WG1487520-4/-5 MSD RPDs, performed on L2118447-24, are outside the acceptance criteria for hexachlorobutadiene (22%) and hexachloroethane (22%).
The surrogate recoveries for the WG1487520-4/-5 MS/MSD, performed on L2118447-24, are outside the acceptance criteria for 2,4,6-tribromophenol (160%/169%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Non-MCP Related Narratives
Perfluorinated Alkyl Acids by Isotope Dilution
L2118447-03, -14, and -15: The MeOH fraction of the extraction is reported for the following compounds: Perfluorooctanesulfonamide (FOSA), N-Methyl Perfluorooctane Sulfonamide (NMeFOSA), N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA), N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE), and N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).

Dissolved Organic Carbon
The samples were field filtered; a filter blank was not received.

Phosphorus, Orthophosphate
L2118447-12: The Orthophosphate Phosphorus result is higher than the Total Phosphorus result. Re-analysis

Case Narrative (continued)

confirmed the original results. The results of the original analyses are reported.

Anions by Ion Chromatography

L2118447-12: The sample has an elevated detection limit for Bromide due to the dilution required by the sample matrix.

The WG1488181-3 MS recoveries, performed on L2118447-01, are outside the acceptance criteria for fluoride (80%) and sulfate (86%); however, the associated LCS recoveries are within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 05/25/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	Batch QC	WG1487779-3	Acetone	LCS	140	70-130	08	potential high bias
8260C	Batch QC	WG1487779-4	Acetone	LCSD	140	70-130	08	potential high bias
8260C	Batch QC	WG1487779-4	Tetrahydrofuran	LCSD	140	70-130	08	potential high bias
8260C	Batch QC (L2118447-24)	WG1490394-7	Tetrachloroethene	MSD	22	20	09,18-25	non-directional bias
MCP Semivolatile Organics - Westborough Lab								
8270D	MW-SD10-04122021	L2118447-17	2,4,6-Tribromophenol	Surrogate	111	15-110	-	potential high bias
8270D	Batch QC	WG1487517-2	Aniline	LCS	16	40-140	01-07,09-13,22-24	potential low bias
8270D	Batch QC	WG1487517-2	4-Chloroaniline	LCS	37	40-140	01-07,09-13,22-24	potential low bias
8270D	Batch QC	WG1487517-3	Aniline	LCSD	23	40-140	01-07,09-13,22-24	potential low bias
8270D	Batch QC	WG1487517-3	Aniline	LCSD	36	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC	WG1487517-3	4-Chloroaniline	LCSD	31	40-140	01-07,09-13,22-24	potential low bias
8270D	Batch QC (L2118447-24)	WG1487517-4	Aniline	MS	23	40-140	01-07,09-13,22-24	potential low bias
8270D	Batch QC (L2118447-24)	WG1487517-4	4-Chloroaniline	MS	28	40-140	01-07,09-13,22-24	potential low bias
8270D	Batch QC (L2118447-24)	WG1487517-5	1,2,4-Trichlorobenzene	MSD	27	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	Bis(2-chloroethyl)ether	MSD	30	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	1,2-Dichlorobenzene	MSD	29	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	1,3-Dichlorobenzene	MSD	30	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	1,4-Dichlorobenzene	MSD	29	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	Bis(2-chloroethoxy)methane	MSD	28	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	Nitrobenzene	MSD	24	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	Aniline	MSD	19	40-140	01-07,09-13,22-24	potential low bias
8270D	Batch QC (L2118447-24)	WG1487517-5	4-Chloroaniline	MSD	25	40-140	01-07,09-	potential low bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
							13,22-24	
8270D	Batch QC (L2118447-24)	WG1487517-5	Acetophenone	MSD	23	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	2,4,6-Trichlorophenol	MSD	22	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	2-Chlorophenol	MSD	26	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	2,4-Dichlorophenol	MSD	24	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	Phenol	MSD	23	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	2-Methylphenol	MSD	26	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC (L2118447-24)	WG1487517-5	3-Methylphenol/4-Methylphenol	MSD	24	20	01-07,09-13,22-24	non-directional bias
8270D	Batch QC	WG1487590-2	Aniline	LCS	29	40-140	15-21,25	potential low bias
8270D	Batch QC	WG1487590-2	2,4,6-Tribromophenol	Surrogate	126	15-110	-	potential high bias
8270D	Batch QC	WG1487590-3	Benzo(k)fluoranthene	LCSD	23	20	15-21,25	non-directional bias
8270D	Batch QC	WG1487590-3	Aniline	LCSD	30	40-140	15-21,25	potential low bias
MCP Semivolatile Organics by SIM - Westborough Lab								
8270D-SIM	HA20-CMT-3I-04122021	L2118447-04	2,4,6-Tribromophenol	Surrogate	143	15-110	-	potential high bias
8270D-SIM	HA20-CMT-3D2-04122021	L2118447-12	2,4,6-Tribromophenol	Surrogate	127	15-110	-	potential high bias
8270D-SIM	MW-BS26-04122021	L2118447-23	2,4,6-Tribromophenol	Surrogate	154	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1487520-2	2,4,6-Tribromophenol	Surrogate	123	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1487520-3	2,4,6-Tribromophenol	Surrogate	125	15-110	-	potential high bias
8270D-SIM	Batch QC (L2118447-24)	WG1487520-4	Pentachlorophenol	MS	140	30-130	01-07,09-13,22-24	potential high bias
8270D-SIM	Batch QC (L2118447-24)	WG1487520-4	2,4,6-Tribromophenol	Surrogate	169	15-110	-	potential high bias
8270D-SIM	Batch QC (L2118447-24)	WG1487520-5	Hexachlorobutadiene	MSD	22	20	01-07,09-13,22-24	non-directional bias
8270D-SIM	Batch QC (L2118447-24)	WG1487520-5	Hexachloroethane	MSD	22	20	01-07,09-13,22-24	non-directional bias
8270D-SIM	Batch QC (L2118447-24)	WG1487520-5	2,4,6-Tribromophenol	Surrogate	160	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1487591-3	2-Chloronaphthalene	LCSD	26	20	15-21,25	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D-SIM	Batch QC	WG1487591-3	Acenaphthylene	LCSD	24	20	15-21,25	non-directional bias
8270D-SIM	Batch QC	WG1487591-3	Benzo(ghi)perylene	LCSD	22	20	15-21,25	non-directional bias
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2118447-01)	WG1488181-3	Fluoride	MS	80	90-110	01,04,07,12, 15-16,23	potential low bias
300.0	Batch QC (L2118447-01)	WG1488181-3	Sulfate	MS	86	90-110	01,04,07,12, 15-16,23	potential low bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-01	Date Collected:	04/12/21 09:20
Client ID:	ML-3-1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 97,8260C

Analytical Date: 04/23/21 07:41

Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-01 Date Collected: 04/12/21 09:20
Client ID: ML-3-1-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-01	Date Collected:	04/12/21 09:20
Client ID:	ML-3-1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	81		70-130
Dibromofluoromethane	110		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-02
Client ID: MW-S35-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 09:40
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 08:40
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-02 Date Collected: 04/12/21 09:40

Client ID: MW-S35-04122021 Date Received: 04/12/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-02	Date Collected:	04/12/21 09:40
Client ID:	MW-S35-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	81		70-130
Dibromofluoromethane	110		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-03	Date Collected:	04/12/21 09:55
Client ID:	MW-SD37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 09:10
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.23	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-03 Date Collected: 04/12/21 09:55
Client ID: MW-SD37-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.29	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	1.2	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.39	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.39	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-03	Date Collected:	04/12/21 09:55
Client ID:	MW-SD37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	123		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	79		70-130
Dibromofluoromethane	112		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-04
Client ID: HA20-CMT-3I-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 10:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 06:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.69	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	0.86		ug/l	0.50	0.16	1
Toluene	0.57	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	0.36	J	ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.17	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118447

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-04 | Date Collected: 04/12/21 10:00

Client ID: HA20-CMT-3I-04122021 | Date Received: 04/12/21

Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.52	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	0.33	J	ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	0.33	J	ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.32	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.32	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-04	Date Collected:	04/12/21 10:00
Client ID:	HA20-CMT-3I-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	81		70-130
Dibromofluoromethane	104		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-05
Client ID: MW-BS25-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:10
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 09:40
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	9.6		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.64	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	1.3		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-05 Date Collected: 04/12/21 10:10
Client ID: MW-BS25-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.1		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.1		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.1		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-05 Date Collected: 04/12/21 10:10
Client ID: MW-BS25-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	80		70-130
Dibromofluoromethane	111		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-06
Client ID: MW-SD42A-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:15
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 10:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.38	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	0.16	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	2.2		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-06
Client ID: MW-SD42A-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:15
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.8		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	1.4	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.84	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.84	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-06
Client ID: MW-SD42A-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 10:15
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	79		70-130
Dibromofluoromethane	112		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-07
Client ID: BEW-2-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:30
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 10:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.72	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.40	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-07 | Date Collected: 04/12/21 10:30
Client ID: BEW-2-04122021 | Date Received: 04/12/21
Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.8		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	2.0		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	2.0		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-07	Date Collected:	04/12/21 10:30
Client ID:	BEW-2-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	79		70-130
Dibromofluoromethane	111		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-08
Client ID: TRIP BLANK1-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 00:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 08:26
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-08	Date Collected:	04/12/21 00:00
Client ID:	TRIP BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-08	Date Collected:	04/12/21 00:00
Client ID:	TRIP BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	128		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-09
Client ID: HA20-CMT-4S-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 11:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/24/21 06:34
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	24		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-09 Date Collected: 04/12/21 11:00
Client ID: HA20-CMT-4S-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	2.0		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.36	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.36	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-09	Date Collected:	04/12/21 11:00
Client ID:	HA20-CMT-4S-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	108		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-10	Date Collected:	04/12/21 11:25
Client ID:	MW-S09-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 11:42
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	0.19	J	ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-10 Date Collected: 04/12/21 11:25
Client ID: MW-S09-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-10 Date Collected: 04/12/21 11:25
Client ID: MW-S09-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	0.46	J	ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	76		70-130
Dibromofluoromethane	114		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-11	Date Collected:	04/12/21 12:45
Client ID:	MW-SD44-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 12:12
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	0.68	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	2.3		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-11
Client ID: MW-SD44-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 12:45
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.23	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-11	Date Collected:	04/12/21 12:45
Client ID:	MW-SD44-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	78		70-130
Dibromofluoromethane	114		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-12
Client ID: HA20-CMT-3D2-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 12:40
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 07:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	7.0		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.64	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	0.22	J	ug/l	0.50	0.16	1
Toluene	0.28	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.37	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-12 Date Collected: 04/12/21 12:40
Client ID: HA20-CMT-3D2-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.88	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.34	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.34	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	2.2	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	0.27	J	ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-12	Date Collected:	04/12/21 12:40
Client ID:	HA20-CMT-3D2-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	80		70-130
Dibromofluoromethane	107		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-13	Date Collected:	04/12/21 13:45
Client ID:	MW-BS37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 12:42
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-13
Client ID: MW-BS37-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 13:45
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.39	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	0.86	J	ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.50	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.50	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-13	Date Collected:	04/12/21 13:45
Client ID:	MW-BS37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	78		70-130
Dibromofluoromethane	112		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-15
Client ID: EQ BLANK1-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 13:12
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-15	Date Collected:	04/12/21 15:00
Client ID:	EQ BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-15	Date Collected:	04/12/21 15:00
Client ID:	EQ BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	77		70-130
Dibromofluoromethane	116		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-16	Date Collected:	04/12/21 14:20
Client ID:	MW-SD64-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Matrix: Water

Analytical Method: 97,8260C

Analytical Date: 04/23/21 13:43

Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.8		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-16
Client ID: MW-SD64-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 14:20
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-16
Client ID: MW-SD64-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 14:20
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	78		70-130
Dibromofluoromethane	115		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-17	Date Collected:	04/12/21 14:20
Client ID:	MW-SD10-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/23/21 14:13
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.9		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-17	Date Collected:	04/12/21 14:20
Client ID:	MW-SD10-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-17 Date Collected: 04/12/21 14:20

Client ID: MW-SD10-04122021 Date Received: 04/12/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	78		70-130
Dibromofluoromethane	115		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-18 Date Collected: 04/12/21 14:25
Client ID: MW-SD10-04122021 DUP Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/24/21 07:15
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	2.4		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-18 Date Collected: 04/12/21 14:25
Client ID: MW-SD10-04122021 DUP Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-18	Date Collected:	04/12/21 14:25
Client ID:	MW-SD10-04122021 DUP	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	121		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-19	Date Collected:	04/12/21 15:10
Client ID:	P-4-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/24/21 07:56
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	2.3		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-19
Client ID: P-4-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 15:10
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-19 Date Collected: 04/12/21 15:10

Client ID: P-4-04122021 Date Received: 04/12/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	124		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-20	Date Collected:	04/12/21 15:00
Client ID:	HA20-CMT-4I-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 97,8260C

Analytical Date: 04/24/21 08:37

Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.45	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.72	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-20	Date Collected:	04/12/21 15:00
Client ID:	HA20-CMT-4I-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-20
Client ID: HA20-CMT-4I-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 15:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	124		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-21 Date Collected: 04/12/21 16:00
Client ID: MW-S03-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/24/21 09:18
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-21 Date Collected: 04/12/21 16:00
Client ID: MW-S03-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-21 Date Collected: 04/12/21 16:00
Client ID: MW-S03-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	120		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-22
Client ID: MW-S26-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:50
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/24/21 09:59
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-22 Date Collected: 04/12/21 15:50
Client ID: MW-S26-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-22 Date Collected: 04/12/21 15:50
Client ID: MW-S26-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	125		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-23
Client ID: MW-BS26-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 13:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/24/21 10:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-23	Date Collected:	04/12/21 13:20
Client ID:	MW-BS26-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-23
Client ID: MW-BS26-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 13:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	129		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-24
Client ID: MW-SD45-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/24/21 05:53
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-24 Date Collected: 04/12/21 15:25
Client ID: MW-SD45-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-24	Date Collected:	04/12/21 15:25
Client ID:	MW-SD45-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	122		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-25
Client ID: MW-S37-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 16:05
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/24/21 11:20
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-25 Date Collected: 04/12/21 16:05
Client ID: MW-S37-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-25	Date Collected:	04/12/21 16:05
Client ID:	MW-S37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	120		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:59
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 08 Batch: WG1487779-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:59
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 08 Batch: WG1487779-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:59
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 08 Batch: WG1487779-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	130		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/23/21 06:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-07,10-13,15-17 Batch: WG1489835-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/23/21 06:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-07,10-13,15-17 Batch: WG1489835-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/23/21 06:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-07,10-13,15-17 Batch: WG1489835-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	80		70-130
Dibromofluoromethane	104		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/24/21 03:49
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09,18-25 Batch: WG1490394-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/24/21 03:49
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09,18-25 Batch: WG1490394-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/24/21 03:49
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09,18-25 Batch: WG1490394-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	112		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG1487779-3 WG1487779-4								
Methylene chloride	120		110		70-130	9		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	120		110		70-130	9		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	120		110		70-130	9		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	110		98		70-130	12		20
1,2-Dichloroethane	120		120		70-130	0		20
1,1,1-Trichloroethane	120		110		70-130	9		20
Bromodichloromethane	120		110		70-130	9		20
trans-1,3-Dichloropropene	120		120		70-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	96		100		70-130	4		20
1,1,2,2-Tetrachloroethane	120		130		70-130	8		20
Benzene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	120		110		70-130	9		20
Bromomethane	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG1487779-3 WG1487779-4								
Vinyl chloride	110		110		70-130	0		20
Chloroethane	130		120		70-130	8		20
1,1-Dichloroethene	110		100		70-130	10		20
trans-1,2-Dichloroethene	110		100		70-130	10		20
Trichloroethene	110		100		70-130	10		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	110		105		70-130	5		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	110		120		70-130	9		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	110		100		70-130	10		20
Acetone	**140**	Q	**140**	Q	70-130	0		20
Carbon disulfide	120		110		70-130	9		20
Methyl ethyl ketone	120		130		70-130	8		20
Methyl isobutyl ketone	97		110		70-130	13		20
2-Hexanone	100		120		70-130	18		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	130		**140**	Q	70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG1487779-3 WG1487779-4

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
2,2-Dichloropropane	120		110		70-130	9		20
1,2-Dibromoethane	100		110		70-130	10		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	97		98		70-130	1		20
n-Butylbenzene	100		110		70-130	10		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	110		100		70-130	10		20
p-Chlorotoluene	110		100		70-130	10		20
1,2-Dibromo-3-chloropropane	100		120		70-130	18		20
Hexachlorobutadiene	100		100		70-130	0		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	99		100		70-130	1		20
Naphthalene	92		97		70-130	5		20
n-Propylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	96		98		70-130	2		20
1,2,4-Trichlorobenzene	93		95		70-130	2		20
1,3,5-Trimethylbenzene	100		100		70-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Diethyl ether	100		110		70-130	10		20
Diisopropyl Ether	120		120		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		110		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG1487779-3 WG1487779-4								
Tertiary-Amyl Methyl Ether	96		100		70-130	4		20
1,4-Dioxane	126		130		70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		108		70-130
Toluene-d8	104		101		70-130
4-Bromofluorobenzene	97		91		70-130
Dibromofluoromethane	115		110		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07,10-13,15-17 Batch: WG1489835-3 WG1489835-4								
Methylene chloride	94		91		70-130	3		20
1,1-Dichloroethane	97		92		70-130	5		20
Chloroform	100		98		70-130	2		20
Carbon tetrachloride	120		120		70-130	0		20
1,2-Dichloropropane	93		89		70-130	4		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	92		90		70-130	2		20
Tetrachloroethene	120		110		70-130	9		20
Chlorobenzene	98		96		70-130	2		20
Trichlorofluoromethane	120		120		70-130	0		20
1,2-Dichloroethane	120		120		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	100		99		70-130	1		20
trans-1,3-Dichloropropene	100		98		70-130	2		20
cis-1,3-Dichloropropene	100		97		70-130	3		20
1,1-Dichloropropene	99		94		70-130	5		20
Bromoform	95		94		70-130	1		20
1,1,2,2-Tetrachloroethane	74		72		70-130	3		20
Benzene	93		90		70-130	3		20
Toluene	93		90		70-130	3		20
Ethylbenzene	98		94		70-130	4		20
Chloromethane	100		92		70-130	8		20
Bromomethane	110		99		70-130	11		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07,10-13,15-17 Batch: WG1489835-3 WG1489835-4								
Vinyl chloride	87		82		70-130	6		20
Chloroethane	81		77		70-130	5		20
1,1-Dichloroethene	94		92		70-130	2		20
trans-1,2-Dichloroethene	94		92		70-130	2		20
Trichloroethene	96		92		70-130	4		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	110		100		70-130	10		20
Methyl tert butyl ether	110		100		70-130	10		20
p/m-Xylene	95		90		70-130	5		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	98		93		70-130	5		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	79		78		70-130	1		20
Styrene	100		95		70-130	5		20
Dichlorodifluoromethane	110		110		70-130	0		20
Acetone	110		110		70-130	0		20
Carbon disulfide	83		79		70-130	5		20
Methyl ethyl ketone	110		110		70-130	0		20
Methyl isobutyl ketone	88		86		70-130	2		20
2-Hexanone	96		96		70-130	0		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07,10-13,15-17 Batch: WG1489835-3 WG1489835-4								
2,2-Dichloropropane	120		110		70-130	9		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	92		90		70-130	2		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	92		90		70-130	2		20
n-Butylbenzene	100		95		70-130	5		20
sec-Butylbenzene	92		88		70-130	4		20
tert-Butylbenzene	98		93		70-130	5		20
o-Chlorotoluene	86		81		70-130	6		20
p-Chlorotoluene	89		85		70-130	5		20
1,2-Dibromo-3-chloropropane	85		87		70-130	2		20
Hexachlorobutadiene	96		93		70-130	3		20
Isopropylbenzene	84		80		70-130	5		20
p-Isopropyltoluene	100		96		70-130	4		20
Naphthalene	110		110		70-130	0		20
n-Propylbenzene	88		83		70-130	6		20
1,2,3-Trichlorobenzene	130		120		70-130	8		20
1,2,4-Trichlorobenzene	120		120		70-130	0		20
1,3,5-Trimethylbenzene	110		110		70-130	0		20
1,2,4-Trimethylbenzene	120		110		70-130	9		20
Diethyl ether	87		81		70-130	7		20
Diisopropyl Ether	110		100		70-130	10		20
Ethyl-Tert-Butyl-Ether	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07,10-13,15-17 Batch: WG1489835-3 WG1489835-4								
Tertiary-Amyl Methyl Ether	100		99		70-130	1		20
1,4-Dioxane	96		84		70-130	13		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	115		115		70-130
Toluene-d8	93		92		70-130
4-Bromofluorobenzene	78		75		70-130
Dibromofluoromethane	106		105		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,18-25 Batch: WG1490394-3 WG1490394-4								
Methylene chloride	110		100		70-130	10		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	120		110		70-130	9		20
1,2-Dichloropropane	110		100		70-130	10		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	110		100		70-130	10		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	110		110		70-130	0		20
Trichlorofluoromethane	110		110		70-130	0		20
1,2-Dichloroethane	110		100		70-130	10		20
1,1,1-Trichloroethane	110		100		70-130	10		20
Bromodichloromethane	110		100		70-130	10		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	100		100		70-130	0		20
1,1,2,2-Tetrachloroethane	110		100		70-130	10		20
Benzene	110		100		70-130	10		20
Toluene	100		100		70-130	0		20
Ethylbenzene	120		110		70-130	9		20
Chloromethane	110		100		70-130	10		20
Bromomethane	130		120		70-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,18-25 Batch: WG1490394-3 WG1490394-4								
Vinyl chloride	100		97		70-130	3		20
Chloroethane	120		100		70-130	18		20
1,1-Dichloroethene	110		110		70-130	0		20
trans-1,2-Dichloroethene	110		100		70-130	10		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	110		100		70-130	10		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		100		70-130	10		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	120		115		70-130	4		20
o-Xylene	110		105		70-130	5		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		100		70-130	10		20
1,2,3-Trichloropropane	110		100		70-130	10		20
Styrene	110		105		70-130	5		20
Dichlorodifluoromethane	100		91		70-130	9		20
Acetone	110		94		70-130	16		20
Carbon disulfide	110		100		70-130	10		20
Methyl ethyl ketone	100		98		70-130	2		20
Methyl isobutyl ketone	100		95		70-130	5		20
2-Hexanone	98		93		70-130	5		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,18-25 Batch: WG1490394-3 WG1490394-4								
2,2-Dichloropropane	110		100		70-130	10		20
1,2-Dibromoethane	110		100		70-130	10		20
1,3-Dichloropropane	110		100		70-130	10		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	100		110		70-130	10		20
n-Butylbenzene	110		110		70-130	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	100		100		70-130	0		20
Hexachlorobutadiene	110		110		70-130	0		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	99		97		70-130	2		20
n-Propylbenzene	120		110		70-130	9		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	110		110		70-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
Diethyl ether	100		100		70-130	0		20
Diisopropyl Ether	110		100		70-130	10		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,18-25 Batch: WG1490394-3 WG1490394-4								
Tertiary-Amyl Methyl Ether	100		96		70-130	4		20
1,4-Dioxane	92		82		70-130	11		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	93		84		70-130
Toluene-d8	104		100		70-130
4-Bromofluorobenzene	95		100		70-130
Dibromofluoromethane	96		97		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,18-25 QC Batch ID: WG1490394-6 WG1490394-7 QC Sample: L2118447-24 Client ID: MW-SD45-04122021												
Methylene chloride	ND	10	11	110		10	100		70-130	10		20
1,1-Dichloroethane	ND	10	11	110		11	110		70-130	0		20
Chloroform	ND	10	11	110		10	100		70-130	10		20
Carbon tetrachloride	ND	10	12	120		12	120		70-130	0		20
1,2-Dichloropropane	ND	10	11	110		10	100		70-130	10		20
Dibromochloromethane	ND	10	10	100		9.3	93		70-130	7		20
1,1,2-Trichloroethane	ND	10	11	110		9.6	96		70-130	14		20
Tetrachloroethene	ND	10	12	120		9.6	96		70-130	**22**	Q	20
Chlorobenzene	ND	10	11	110		9.7	97		70-130	13		20
Trichlorofluoromethane	ND	10	12	120		11	110		70-130	9		20
1,2-Dichloroethane	ND	10	11	110		10	100		70-130	10		20
1,1,1-Trichloroethane	ND	10	12	120		11	110		70-130	9		20
Bromodichloromethane	ND	10	11	110		10	100		70-130	10		20
trans-1,3-Dichloropropene	ND	10	11	110		9.3	93		70-130	17		20
cis-1,3-Dichloropropene	ND	10	9.9	99		9.6	96		70-130	3		20
1,1-Dichloropropene	ND	10	12	120		11	110		70-130	9		20
Bromoform	ND	10	9.6	96		9.3	93		70-130	3		20
1,1,2,2-Tetrachloroethane	ND	10	10	100		10	100		70-130	0		20
Benzene	ND	10	11	110		10	100		70-130	10		20
Toluene	ND	10	11	110		9.3	93		70-130	17		20
Ethylbenzene	ND	10	12	120		10	100		70-130	18		20
Chloromethane	ND	10	12	120		11	110		70-130	9		20
Bromomethane	ND	10	13	130		11	110		70-130	17		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,18-25 QC Batch ID: WG1490394-6 WG1490394-7 QC Sample: L2118447-24 Client ID: MW-SD45-04122021												
Vinyl chloride	ND	10	11	110		10	100		70-130	10		20
Chloroethane	ND	10	12	120		11	110		70-130	9		20
1,1-Dichloroethene	ND	10	12	120		11	110		70-130	9		20
trans-1,2-Dichloroethene	ND	10	11	110		11	110		70-130	0		20
Trichloroethene	ND	10	12	120		10	100		70-130	18		20
1,2-Dichlorobenzene	ND	10	10	100		9.8	98		70-130	2		20
1,3-Dichlorobenzene	ND	10	10	100		10	100		70-130	0		20
1,4-Dichlorobenzene	ND	10	10	100		9.8	98		70-130	2		20
Methyl tert butyl ether	ND	10	10	100		9.4	94		70-130	6		20
p/m-Xylene	ND	20	24	120		21	105		70-130	13		20
o-Xylene	ND	20	22	110		19	95		70-130	15		20
cis-1,2-Dichloroethene	ND	10	11	110		10	100		70-130	10		20
Dibromomethane	ND	10	11	110		10	100		70-130	10		20
1,2,3-Trichloropropane	ND	10	9.7	97		9.9	99		70-130	2		20
Styrene	ND	20	23	115		20	100		70-130	14		20
Dichlorodifluoromethane	ND	10	10	100		9.6	96		70-130	4		20
Acetone	ND	10	10	100		10	100		70-130	0		20
Carbon disulfide	ND	10	12	120		11	110		70-130	9		20
Methyl ethyl ketone	ND	10	9.9	99		8.7	87		70-130	13		20
Methyl isobutyl ketone	ND	10	8.9	89		8.4	84		70-130	6		20
2-Hexanone	ND	10	9.1	91		7.9	79		70-130	14		20
Bromochloromethane	ND	10	11	110		11	110		70-130	0		20
Tetrahydrofuran	ND	10	10	100		8.9	89		70-130	12		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,18-25 QC Batch ID: WG1490394-6 WG1490394-7 QC Sample: L2118447-24 Client ID: MW-SD45-04122021												
2,2-Dichloropropane	ND	10	10	100		9.6	96		70-130	4		20
1,2-Dibromoethane	ND	10	10	100		9.2	92		70-130	8		20
1,3-Dichloropropane	ND	10	11	110		9.2	92		70-130	18		20
1,1,1,2-Tetrachloroethane	ND	10	11	110		9.4	94		70-130	16		20
Bromobenzene	ND	10	10	100		9.5	95		70-130	5		20
n-Butylbenzene	ND	10	11	110		10	100		70-130	10		20
sec-Butylbenzene	ND	10	11	110		10	100		70-130	10		20
tert-Butylbenzene	ND	10	10	100		10	100		70-130	0		20
o-Chlorotoluene	ND	10	11	110		10	100		70-130	10		20
p-Chlorotoluene	ND	10	10	100		10	100		70-130	0		20
1,2-Dibromo-3-chloropropane	ND	10	9.5	95		9.4	94		70-130	1		20
Hexachlorobutadiene	ND	10	11	110		10	100		70-130	10		20
Isopropylbenzene	ND	10	10	100		10	100		70-130	0		20
p-Isopropyltoluene	ND	10	10	100		9.7	97		70-130	3		20
Naphthalene	ND	10	8.6	86		8.6	86		70-130	0		20
n-Propylbenzene	ND	10	11	110		10	100		70-130	10		20
1,2,3-Trichlorobenzene	ND	10	10	100		9.9	99		70-130	1		20
1,2,4-Trichlorobenzene	ND	10	9.8	98		9.3	93		70-130	5		20
1,3,5-Trimethylbenzene	ND	10	11	110		10	100		70-130	10		20
1,2,4-Trimethylbenzene	ND	10	11	110		10	100		70-130	10		20
Diethyl ether	ND	10	10	100		9.8	98		70-130	2		20
Diisopropyl Ether	ND	10	10	100		9.6	96		70-130	4		20
Ethyl-Tert-Butyl-Ether	ND	10	10	100		9.3	93		70-130	7		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09,18-25 QC Batch ID: WG1490394-6 WG1490394-7 QC Sample: L2118447-24 Client ID: MW-SD45-04122021												
Tertiary-Amyl Methyl Ether	ND	10	9.4	94		8.6	86		70-130	9		20
1,4-Dioxane	ND	500	510	102		510	102		70-130	0		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		102		70-130
4-Bromofluorobenzene	92		98		70-130
Dibromofluoromethane	106		109		70-130
Toluene-d8	105		96		70-130

SEMIVOLATILES

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-01
Client ID: ML-3-1-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 09:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 16:33
Analyst: EK
Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	3.5		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-01	Date Collected:	04/12/21 09:20
Client ID:	ML-3-1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	54		15-110
4-Terphenyl-d14	70		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-01	Date Collected:	04/12/21 09:20
Client ID:	ML-3-1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/17/21 11:21
Analytical Date:	04/20/21 16:44		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-01	Date Collected:	04/12/21 09:20
Client ID:	ML-3-1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-110
Phenol-d6	45		15-110
Nitrobenzene-d5	53		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	76		15-110
4-Terphenyl-d14	69		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-01
Client ID: ML-3-1-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 09:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 01:08
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-02
Client ID: MW-S35-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 09:40
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 16:57
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.6	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-02	Date Collected:	04/12/21 09:40
Client ID:	MW-S35-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	69		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-02
Client ID: MW-S35-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 09:40
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 17:04
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-02	Date Collected:	04/12/21 09:40
Client ID:	MW-S35-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	46		15-110
Nitrobenzene-d5	54		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	76		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-02
Client ID: MW-S35-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 09:40
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 01:33
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118447

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-03	Date Collected:	04/12/21 09:55
Client ID:	MW-SD37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 05:52		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.78	0.518	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.8	6.57	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.8	5.93	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.6	19.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.6	20.1	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	73		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	66		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	64		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	58		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	55		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-03	Date Collected:	04/12/21 09:55
Client ID:	MW-SD37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 11:39		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	5.70		ng/l	1.78	0.364	1
Perfluoropentanoic Acid (PFPeA)	9.26		ng/l	1.78	0.354	1
Perfluorobutanesulfonic Acid (PFBS)	4.35		ng/l	1.78	0.212	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.78	0.404	1
Perfluorohexanoic Acid (PFHxA)	6.67		ng/l	1.78	0.293	1
Perfluoropentanesulfonic Acid (PFPeS)	0.428	J	ng/l	1.78	0.219	1
Perfluoroheptanoic Acid (PFHpA)	2.57		ng/l	1.78	0.201	1
Perfluorohexanesulfonic Acid (PFHxS)	2.68		ng/l	1.78	0.336	1
Perfluorooctanoic Acid (PFOA)	10.5		ng/l	1.78	0.211	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.78	1.19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.78	0.614	1
Perfluorononanoic Acid (PFNA)	2.06		ng/l	1.78	0.278	1
Perfluorooctanesulfonic Acid (PFOS)	8.80		ng/l	1.78	0.450	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.78	0.271	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.78	1.08	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.78	1.00	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	0.604	J	ng/l	1.78	0.578	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.78	0.232	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.78	0.875	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.943	J	ng/l	1.78	0.718	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.78	0.332	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.78	0.292	1
Perfluorotetradecanoic Acid (PFTA)	0.239	JF	ng/l	1.78	0.221	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.6	20.3	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.78	0.300	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.57	1.11	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.57	1.02	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-03	Date Collected:	04/12/21 09:55
Client ID:	MW-SD37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.78	0.550	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.46	1.80	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.78	0.247	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.78	0.262	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	88		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	86		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	87		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	99		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	76		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	80		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	101		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	86		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	125		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	83		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	85		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	127		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	69		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	84		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	83		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	93		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	89		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	76		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	100		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-03
Client ID: MW-SD37-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 09:55
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 17:20
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.9	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-03	Date Collected:	04/12/21 09:55
Client ID:	MW-SD37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	60		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	59		15-110
4-Terphenyl-d14	66		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-03
Client ID: MW-SD37-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 09:55
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 17:24
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-03	Date Collected:	04/12/21 09:55
Client ID:	MW-SD37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	57		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	87		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-03	Date Collected:	04/12/21 09:55
Client ID:	MW-SD37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 01:57		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.184		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-04
Client ID: HA20-CMT-3I-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 17:44
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-04 Date Collected: 04/12/21 10:00
Client ID: HA20-CMT-3I-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	84		15-110
Phenol-d6	76		15-110
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	93		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-04
Client ID: HA20-CMT-3I-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 17:43
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.08	JB	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	0.02	J	ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	JB	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-04	Date Collected:	04/12/21 10:00
Client ID:	HA20-CMT-3I-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	**143**	Q	15-110
4-Terphenyl-d14	80		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-04	Date Collected:	04/12/21 10:00
Client ID:	HA20-CMT-3I-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 02:22		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	3.33		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-05	Date Collected:	04/12/21 10:10
Client ID:	MW-BS25-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/17/21 11:17
Analytical Date:	04/19/21 18:08		
Analyst:	EK		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.0	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-05	Date Collected:	04/12/21 10:10
Client ID:	MW-BS25-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	60		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	64		15-110
4-Terphenyl-d14	70		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-05
Client ID: MW-BS25-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:10
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 18:03
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-05
Client ID: MW-BS25-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:10
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	61		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	100		15-110
4-Terphenyl-d14	74		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-05	Date Collected:	04/12/21 10:10
Client ID:	MW-BS25-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 02:47		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	16.5		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-06
Client ID: MW-SD42A-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:15
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 18:32
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.9	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-06	Date Collected:	04/12/21 10:15
Client ID:	MW-SD42A-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		15-110
Phenol-d6	72		15-110
Nitrobenzene-d5	92		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	77		15-110
4-Terphenyl-d14	79		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-06	Date Collected:	04/12/21 10:15
Client ID:	MW-SD42A-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/17/21 11:21
Analytical Date:	04/20/21 18:22		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-06	Date Collected:	04/12/21 10:15
Client ID:	MW-SD42A-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	44		30-130
2-Fluorobiphenyl	49		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	50		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-06	Date Collected:	04/12/21 10:15
Client ID:	MW-SD42A-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 03:12		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	6.19		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-07
Client ID: BEW-2-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:30
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 18:55
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-07	Date Collected:	04/12/21 10:30
Client ID:	BEW-2-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	58		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-07	Date Collected:	04/12/21 10:30
Client ID:	BEW-2-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/17/21 11:21
Analytical Date:	04/20/21 18:42		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-07	Date Collected:	04/12/21 10:30
Client ID:	BEW-2-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	109		15-110
4-Terphenyl-d14	79		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-07	Date Collected:	04/12/21 10:30
Client ID:	BEW-2-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 03:36		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	6.78		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-09
Client ID: HA20-CMT-4S-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 11:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 19:19
Analyst: EK
Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-09 Date Collected: 04/12/21 11:00

Client ID: HA20-CMT-4S-04122021 Date Received: 04/12/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-09
Client ID: HA20-CMT-4S-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 11:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 19:02
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-09	Date Collected:	04/12/21 11:00
Client ID:	HA20-CMT-4S-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	87		15-110
4-Terphenyl-d14	80		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-09
Client ID: HA20-CMT-4S-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 11:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 04:01
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.261		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-10
Client ID: MW-S09-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 11:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 19:43
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.6	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-10
Client ID: MW-S09-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 11:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	63		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	60		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-10
Client ID: MW-S09-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 11:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 19:21
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-10 Date Collected: 04/12/21 11:25
Client ID: MW-S09-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	56		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	100		15-110
4-Terphenyl-d14	69		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-10	Date Collected:	04/12/21 11:25
Client ID:	MW-S09-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 04:25		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-11
Client ID: MW-SD44-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 12:45
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 20:06
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.8	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-11	Date Collected:	04/12/21 12:45
Client ID:	MW-SD44-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	73		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	66		15-110
4-Terphenyl-d14	72		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-11
Client ID: MW-SD44-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 12:45
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 19:41
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-11	Date Collected:	04/12/21 12:45
Client ID:	MW-SD44-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	68		15-110
Phenol-d6	62		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	108		15-110
4-Terphenyl-d14	84		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-11
Client ID: MW-SD44-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 12:45
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 04:50
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	2.90		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-12	Date Collected:	04/12/21 12:40
Client ID:	HA20-CMT-3D2-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/17/21 11:47
Analytical Date:	04/19/21 20:30		
Analyst:	EK		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-12	Date Collected:	04/12/21 12:40
Client ID:	HA20-CMT-3D2-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		15-110
Phenol-d6	68		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	86		15-110
4-Terphenyl-d14	75		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-12	Date Collected:	04/12/21 12:40
Client ID:	HA20-CMT-3D2-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/17/21 11:47
Analytical Date:	04/20/21 20:00		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-12 Date Collected: 04/12/21 12:40
Client ID: HA20-CMT-3D2-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	**127**	Q	15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-12
Client ID: HA20-CMT-3D2-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 12:40
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 05:14
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	3.13		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-13
Client ID: MW-BS37-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 13:45
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 20:54
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	3.4		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-13	Date Collected:	04/12/21 13:45
Client ID:	MW-BS37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		15-110
Phenol-d6	58		15-110
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	67		15-110
4-Terphenyl-d14	65		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-13	Date Collected:	04/12/21 13:45
Client ID:	MW-BS37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/17/21 11:47
Analytical Date:	04/20/21 20:20		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-13	Date Collected:	04/12/21 13:45
Client ID:	MW-BS37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	63		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	99		15-110
4-Terphenyl-d14	79		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-13
Client ID: MW-BS37-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 13:45
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 06:41
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.417		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-14	Date Collected:	04/12/21 14:45
Client ID:	FIELD BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 06:00		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.80	0.522	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.0	6.62	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.0	5.97	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	45.0	20.0	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	45.0	20.2	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	73		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	48		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	49		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	55		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	52		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-14	Date Collected:	04/12/21 14:45
Client ID:	FIELD BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 11:56		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.80	0.367	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.80	0.356	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.80	0.214	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.80	0.406	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.80	0.295	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.80	0.220	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.80	0.202	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.80	0.338	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.80	0.212	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.80	1.20	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.80	0.619	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.80	0.280	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.80	0.453	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.80	0.273	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.80	1.09	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.80	1.01	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.80	0.583	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.80	0.234	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.80	0.881	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.80	0.723	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.80	0.334	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.80	0.294	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.80	0.223	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	45.0	20.4	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.80	0.302	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.60	1.12	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.60	1.03	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-14	Date Collected:	04/12/21 14:45
Client ID:	FIELD BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.80	0.554	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.50	1.82	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.80	0.249	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.80	0.264	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	82		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	76		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	79		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	83		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	102		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	89		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	141		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	87		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	95		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	89		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	156		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	71		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	90		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	85		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	100		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	94		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	81		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	119		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-15
Client ID: EQ BLANK1-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 06:07
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.72	0.500	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.2	6.34	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.2	5.72	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	43.1	19.1	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	43.1	19.4	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	78		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	53		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	51		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	63		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	57		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-15
Client ID: EQ BLANK1-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 12:12
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.72	0.352	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.72	0.341	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.72	0.205	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.72	0.390	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.72	0.283	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.72	0.211	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.72	0.194	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.72	0.324	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.72	0.203	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.72	1.15	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.72	0.593	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.72	0.269	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.72	0.434	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.72	0.262	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.72	1.04	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.72	0.966	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.72	0.559	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.72	0.224	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.72	0.845	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.72	0.693	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.72	0.321	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.72	0.282	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.72	0.214	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	43.1	19.6	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.72	0.290	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.45	1.07	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.45	0.990	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-15	Date Collected:	04/12/21 15:00
Client ID:	EQ BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.72	0.531	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.31	1.74	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.72	0.239	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.72	0.253	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	90		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	78		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	77		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	82		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	75		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	80		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	95		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	85		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	141		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	88		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	89		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	154		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	63		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	95		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	77		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	92		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	86		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	80		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	121		10-206

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-15
Client ID: EQ BLANK1-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 15:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 22:48
Analyst: SZ
Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-15 Date Collected: 04/12/21 15:00
Client ID: EQ BLANK1-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	85		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	78		15-110
4-Terphenyl-d14	90		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-15
Client ID: EQ BLANK1-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 20:47
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-15	Date Collected:	04/12/21 15:00
Client ID:	EQ BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	112		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	59		15-110
4-Terphenyl-d14	92		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-15	Date Collected:	04/12/21 15:00
Client ID:	EQ BLANK1-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 07:06		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-16
Client ID: MW-SD64-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 14:20
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 23:10
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-16	Date Collected:	04/12/21 14:20
Client ID:	MW-SD64-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	103		15-110
4-Terphenyl-d14	89		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-16
Client ID: MW-SD64-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 14:20
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 21:07
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-16	Date Collected:	04/12/21 14:20
Client ID:	MW-SD64-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	101		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	78		15-110
4-Terphenyl-d14	97		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-16	Date Collected:	04/12/21 14:20
Client ID:	MW-SD64-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 07:31		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.178		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-17
Client ID: MW-SD10-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 14:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 23:33
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-17 Date Collected: 04/12/21 14:20
Client ID: MW-SD10-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		15-110
Phenol-d6	67		15-110
Nitrobenzene-d5	99		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	**111**	Q	15-110
4-Terphenyl-d14	96		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-17	Date Collected:	04/12/21 14:20
Client ID:	MW-SD10-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/17/21 17:56
Analytical Date:	04/21/21 21:27		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-17 Date Collected: 04/12/21 14:20
Client ID: MW-SD10-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	122		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	84		15-110
4-Terphenyl-d14	105		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-17
Client ID: MW-SD10-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 14:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 07:55
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-18
Client ID: MW-SD10-04122021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/12/21 14:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 23:55
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.9	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-18
Client ID: MW-SD10-04122021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/12/21 14:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	77		15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-18
Client ID: MW-SD10-04122021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/12/21 14:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 21:48
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-18	Date Collected:	04/12/21 14:25
Client ID:	MW-SD10-04122021 DUP	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	43		15-110
Nitrobenzene-d5	100		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	54		15-110
4-Terphenyl-d14	96		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-18	Date Collected:	04/12/21 14:25
Client ID:	MW-SD10-04122021 DUP	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 08:20		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-19	Date Collected:	04/12/21 15:10
Client ID:	P-4-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/17/21 17:56
Analytical Date:	04/20/21 00:18		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-19	Date Collected:	04/12/21 15:10
Client ID:	P-4-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	93		15-110
4-Terphenyl-d14	84		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-19
Client ID: P-4-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:10
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 22:08
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-19	Date Collected:	04/12/21 15:10
Client ID:	P-4-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	105		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	76		15-110
4-Terphenyl-d14	100		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-19	Date Collected:	04/12/21 15:10
Client ID:	P-4-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 08:45		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-20
Client ID: HA20-CMT-4I-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 00:40
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-20	Date Collected:	04/12/21 15:00
Client ID:	HA20-CMT-4I-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	68		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	109		15-110
4-Terphenyl-d14	80		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-20	Date Collected:	04/12/21 15:00
Client ID:	HA20-CMT-4I-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/17/21 17:56
Analytical Date:	04/21/21 22:28		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-20	Date Collected:	04/12/21 15:00
Client ID:	HA20-CMT-4I-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	110		30-130
2-Fluorobiphenyl	83		30-130
2,4,6-Tribromophenol	85		15-110
4-Terphenyl-d14	100		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-20	Date Collected:	04/12/21 15:00
Client ID:	HA20-CMT-4I-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 09:11		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.314		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-21
Client ID: MW-S03-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 01:03
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.9	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-21 Date Collected: 04/12/21 16:00

Client ID: MW-S03-04122021 Date Received: 04/12/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		15-110
Phenol-d6	58		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	87		30-130
2,4,6-Tribromophenol	98		15-110
4-Terphenyl-d14	87		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-21	Date Collected:	04/12/21 16:00
Client ID:	MW-S03-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/17/21 17:56
Analytical Date:	04/21/21 22:48		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-21	Date Collected:	04/12/21 16:00
Client ID:	MW-S03-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	117		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	106		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-21	Date Collected:	04/12/21 16:00
Client ID:	MW-S03-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 07:30
Analytical Date:	04/26/21 09:36		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-22
Client ID: MW-S26-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:50
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 21:17
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-22	Date Collected:	04/12/21 15:50
Client ID:	MW-S26-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	45		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	51		15-110
4-Terphenyl-d14	58		30-130

Project Name: NUCLEAR METALS

Lab Number: L2118447

Project Number: 3252H

Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-22
Client ID: MW-S26-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:50
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 20:40
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-22 Date Collected: 04/12/21 15:50
Client ID: MW-S26-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	32		15-110
Nitrobenzene-d5	42		30-130
2-Fluorobiphenyl	51		30-130
2,4,6-Tribromophenol	66		15-110
4-Terphenyl-d14	54		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-22
Client ID: MW-S26-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:50
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 10:01
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.377		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-23	Date Collected:	04/12/21 13:20
Client ID:	MW-BS26-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/17/21 11:47
Analytical Date:	04/19/21 21:41		
Analyst:	EK		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	5.8		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-23	Date Collected:	04/12/21 13:20
Client ID:	MW-BS26-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	81		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-23
Client ID: MW-BS26-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 13:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 20:59
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-23	Date Collected:	04/12/21 13:20
Client ID:	MW-BS26-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		15-110
Phenol-d6	69		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	89		30-130
2,4,6-Tribromophenol	**154**	Q	15-110
4-Terphenyl-d14	94		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-23
Client ID: MW-BS26-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 13:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 10:28
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.14		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	37		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-24
Client ID: MW-SD45-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 15:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/19/21 22:04
Analyst: EK
Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.1	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-24
Client ID: MW-SD45-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	46		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	49		15-110
4-Terphenyl-d14	55		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-24
Client ID: MW-SD45-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 21:19
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-24	Date Collected:	04/12/21 15:25
Client ID:	MW-SD45-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	46		30-130
2-Fluorobiphenyl	53		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	53		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-24
Client ID: MW-SD45-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 11:19
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.331		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	36		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118447

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-25	Date Collected:	04/12/21 16:05
Client ID:	MW-S37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/17/21 17:56
Analytical Date:	04/20/21 01:26		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-25 Date Collected: 04/12/21 16:05
Client ID: MW-S37-04122021 Date Received: 04/12/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	79		15-110
4-Terphenyl-d14	78		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-25
Client ID: MW-S37-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 16:05
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 23:08
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-25	Date Collected:	04/12/21 16:05
Client ID:	MW-S37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	102		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	66		15-110
4-Terphenyl-d14	96		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-25	Date Collected:	04/12/21 16:05
Client ID:	MW-S37-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/16/21 11:00
Analytical Date:	04/26/21 12:36		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.443		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	40		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/20/21 05:38	Extraction Date:	04/15/21 09:20
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03,14-15 Batch: WG1486508-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	50		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	46		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03,14-15 Batch: WG1486508-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03,14-15 Batch: WG1486508-1					
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/20/21 08:02	Extraction Date:	04/15/21 09:20
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 03,14-15 Batch: WG1486508-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	84		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	88		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	60		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	78		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	97		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	91		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	114		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	84		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	121		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	69		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	89		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	46		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	103		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	91		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	90		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	113		10-206

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 23:53
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 07:30

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-07,09-13,15-22 Batch: WG1486934-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 11:53
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/16/21 11:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 23-25 Batch: WG1487078-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 14:34
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-07,09-13,22-24 Batch: WG1487517-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 14:34
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-07,09-13,22-24 Batch: WG1487517-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 14:34
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-07,09-13,22-24 Batch: WG1487517-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		15-110
Phenol-d6	71		15-110
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	82		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/20/21 15:06
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 11:21

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-07,09-13,22-24 Batch: WG1487520-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	0.15		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01
Benzo(k)fluoranthene	0.03	J	ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	0.03	J	ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	0.04	J	ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	0.03	J	ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	0.27		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/20/21 15:06	Extraction Date:	04/17/21 11:21
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-07,09-13,22-24 Batch: WG1487520-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	60		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	102		15-110
4-Terphenyl-d14	78		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 17:32
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 15-21,25 Batch: WG1487590-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	1.8	J	ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 17:32
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 15-21,25 Batch: WG1487590-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 17:32
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 15-21,25 Batch: WG1487590-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	94		15-110
4-Terphenyl-d14	92		30-130

Project Name: NUCLEAR METALS　　**Lab Number:** L2118447
Project Number: 3252H　　**Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 09:17
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 15-21,25 Batch: WG1487591-1					
Acenaphthene	0.03	J	ug/l	0.10	0.01
2-Chloronaphthalene	0.11	J	ug/l	0.20	0.02
Fluoranthene	0.05	J	ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02
Benzo(a)pyrene	0.03	J	ug/l	0.10	0.02
Benzo(b)fluoranthene	0.04	J	ug/l	0.10	0.01
Benzo(k)fluoranthene	0.04	J	ug/l	0.10	0.01
Chrysene	0.04	J	ug/l	0.10	0.01
Acenaphthylene	0.04	J	ug/l	0.10	0.01
Anthracene	0.03	J	ug/l	0.10	0.01
Benzo(ghi)perylene	0.04	J	ug/l	0.10	0.01
Fluorene	0.03	J	ug/l	0.10	0.01
Phenanthrene	0.05	J	ug/l	0.10	0.02
Dibenzo(a,h)anthracene	0.04	J	ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	0.04	J	ug/l	0.10	0.01
Pyrene	0.05	J	ug/l	0.10	0.02
2-Methylnaphthalene	0.09	J	ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/19/21 09:17
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 15-21,25 Batch: WG1487591-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	108		30-130
2,4,6-Tribromophenol	72		15-110
4-Terphenyl-d14	107		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,14-15 Batch: WG1486508-2								
Perfluorooctanesulfonamide (FOSA)	86		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	109		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	119		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	99		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	103		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	46				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	42				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	49				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	48				10-187

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,14-15 Batch: WG1486508-2								
Perfluorobutanoic Acid (PFBA)	106		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	108		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	115		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	118		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	110		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	93		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	107		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	100		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	109		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	110		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	106		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	116		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	108		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	113		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	109		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	104		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	142		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	114		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	106		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	107		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	102		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	99		-		67-153	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,14-15 Batch: WG1486508-2								
Perfluorotridecanoic Acid (PFTrDA)	121		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	113		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	120		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	106		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	97		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	78		-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	128		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	102		-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	86		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	77		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,14-15 Batch: WG1486508-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	88				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	77				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	67				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	72				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	77				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	93				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	85				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	125				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	79				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	83				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	130				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	63				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	93				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	47				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	96				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	96				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	81				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	117				10-206

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-07,09-13,15-22 Batch: WG1486934-2 WG1486934-3								
1,4-Dioxane	107		109		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	49		52		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 23-25 Batch: WG1487078-2 WG1487078-3								
1,4-Dioxane	132		112		40-140	16		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	44		48		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-07,09-13,22-24 Batch: WG1487517-2 WG1487517-3								
Acenaphthene	61		61		40-140	0		20
1,2,4-Trichlorobenzene	56		60		40-140	7		20
Hexachlorobenzene	61		61		40-140	0		20
Bis(2-chloroethyl)ether	66		70		40-140	6		20
2-Chloronaphthalene	64		64		40-140	0		20
1,2-Dichlorobenzene	56		60		40-140	7		20
1,3-Dichlorobenzene	54		59		40-140	9		20
1,4-Dichlorobenzene	56		59		40-140	5		20
3,3'-Dichlorobenzidine	58		53		40-140	9		20
2,4-Dinitrotoluene	72		72		40-140	0		20
2,6-Dinitrotoluene	74		75		40-140	1		20
Azobenzene	63		63		40-140	0		20
Fluoranthene	71		68		40-140	4		20
4-Bromophenyl phenyl ether	62		61		40-140	2		20
Bis(2-chloroisopropyl)ether	64		67		40-140	5		20
Bis(2-chloroethoxy)methane	65		68		40-140	5		20
Hexachlorobutadiene	58		61		40-140	5		20
Hexachloroethane	56		60		40-140	7		20
Isophorone	65		67		40-140	3		20
Naphthalene	60		66		40-140	10		20
Nitrobenzene	73		76		40-140	4		20
Bis(2-ethylhexyl)phthalate	76		76		40-140	0		20
Butyl benzyl phthalate	78		75		40-140	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-07,09-13,22-24 Batch: WG1487517-2 WG1487517-3								
Di-n-butylphthalate	70		69		40-140	1		20
Di-n-octylphthalate	83		79		40-140	5		20
Diethyl phthalate	68		67		40-140	1		20
Dimethyl phthalate	71		71		40-140	0		20
Benzo(a)anthracene	71		70		40-140	1		20
Benzo(a)pyrene	82		78		40-140	5		20
Benzo(b)fluoranthene	78		74		40-140	5		20
Benzo(k)fluoranthene	69		67		40-140	3		20
Chrysene	68		65		40-140	5		20
Acenaphthylene	71		72		40-140	1		20
Anthracene	68		66		40-140	3		20
Benzo(ghi)perylene	70		70		40-140	0		20
Fluorene	66		64		40-140	3		20
Phenanthrene	67		65		40-140	3		20
Dibenzo(a,h)anthracene	70		69		40-140	1		20
Indeno(1,2,3-cd)pyrene	73		73		40-140	0		20
Pyrene	68		65		40-140	5		20
Aniline	**16**	Q	**23**	Q	40-140	**36**	Q	20
4-Chloroaniline	**37**	Q	**31**	Q	40-140	18		20
Dibenzofuran	62		62		40-140	0		20
2-Methylnaphthalene	63		66		40-140	5		20
Acetophenone	65		67		40-140	3		20
2,4,6-Trichlorophenol	75		76		30-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-07,09-13,22-24 Batch: WG1487517-2 WG1487517-3								
2-Chlorophenol	64		70		30-130	9		20
2,4-Dichlorophenol	73		75		30-130	3		20
2,4-Dimethylphenol	56		66		30-130	16		20
2-Nitrophenol	86		92		30-130	7		20
4-Nitrophenol	58		59		30-130	2		20
2,4-Dinitrophenol	101		99		30-130	2		20
Pentachlorophenol	79		76		30-130	4		20
Phenol	56		57		30-130	2		20
2-Methylphenol	63		69		30-130	9		20
3-Methylphenol/4-Methylphenol	68		71		30-130	4		20
2,4,5-Trichlorophenol	76		77		30-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	72		76		15-110
Phenol-d6	66		67		15-110
Nitrobenzene-d5	73		74		30-130
2-Fluorobiphenyl	70		73		30-130
2,4,6-Tribromophenol	83		83		15-110
4-Terphenyl-d14	71		70		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-07,09-13,22-24 Batch: WG1487520-2 WG1487520-3								
Acenaphthene	65		65		40-140	0		20
2-Chloronaphthalene	72		74		40-140	3		20
Fluoranthene	80		73		40-140	9		20
Hexachlorobutadiene	64		65		40-140	2		20
Naphthalene	62		63		40-140	2		20
Benzo(a)anthracene	70		65		40-140	7		20
Benzo(a)pyrene	84		79		40-140	6		20
Benzo(b)fluoranthene	71		67		40-140	6		20
Benzo(k)fluoranthene	80		76		40-140	5		20
Chrysene	70		69		40-140	1		20
Acenaphthylene	68		69		40-140	1		20
Anthracene	75		70		40-140	7		20
Benzo(ghi)perylene	78		76		40-140	3		20
Fluorene	68		69		40-140	1		20
Phenanthrene	62		60		40-140	3		20
Dibenzo(a,h)anthracene	87		83		40-140	5		20
Indeno(1,2,3-cd)pyrene	86		77		40-140	11		20
Pyrene	81		73		40-140	10		20
2-Methylnaphthalene	65		68		40-140	5		20
Pentachlorophenol	90		105		30-130	15		20
Hexachlorobenzene	72		68		40-140	6		20
Hexachloroethane	54		54		40-140	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-07,09-13,22-24 Batch: WG1487520-2 WG1487520-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	68		70		15-110
Phenol-d6	58		59		15-110
Nitrobenzene-d5	61		63		30-130
2-Fluorobiphenyl	70		72		30-130
2,4,6-Tribromophenol	**123**	Q	**125**	Q	15-110
4-Terphenyl-d14	77		71		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 15-21,25 Batch: WG1487590-2 WG1487590-3								
Acenaphthene	76		70		40-140	8		20
1,2,4-Trichlorobenzene	65		63		40-140	3		20
Hexachlorobenzene	83		73		40-140	13		20
Bis(2-chloroethyl)ether	67		65		40-140	3		20
2-Chloronaphthalene	70		64		40-140	9		20
1,2-Dichlorobenzene	62		60		40-140	3		20
1,3-Dichlorobenzene	59		59		40-140	0		20
1,4-Dichlorobenzene	59		61		40-140	3		20
3,3'-Dichlorobenzidine	69		59		40-140	16		20
2,4-Dinitrotoluene	88		80		40-140	10		20
2,6-Dinitrotoluene	89		74		40-140	18		20
Azobenzene	76		68		40-140	11		20
Fluoranthene	87		81		40-140	7		20
4-Bromophenyl phenyl ether	86		72		40-140	18		20
Bis(2-chloroisopropyl)ether	75		71		40-140	5		20
Bis(2-chloroethoxy)methane	71		66		40-140	7		20
Hexachlorobutadiene	68		66		40-140	3		20
Hexachloroethane	60		65		40-140	8		20
Isophorone	72		65		40-140	10		20
Naphthalene	68		65		40-140	5		20
Nitrobenzene	80		75		40-140	6		20
Bis(2-ethylhexyl)phthalate	104		108		40-140	4		20
Butyl benzyl phthalate	100		95		40-140	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 15-21,25 Batch: WG1487590-2 WG1487590-3								
Di-n-butylphthalate	93		85		40-140	9		20
Di-n-octylphthalate	108		107		40-140	1		20
Diethyl phthalate	88		79		40-140	11		20
Dimethyl phthalate	82		71		40-140	14		20
Benzo(a)anthracene	94		84		40-140	11		20
Benzo(a)pyrene	97		86		40-140	12		20
Benzo(b)fluoranthene	95		93		40-140	2		20
Benzo(k)fluoranthene	100		79		40-140	**23**	Q	20
Chrysene	91		79		40-140	14		20
Acenaphthylene	71		68		40-140	4		20
Anthracene	83		75		40-140	10		20
Benzo(ghi)perylene	96		86		40-140	11		20
Fluorene	76		68		40-140	11		20
Phenanthrene	82		72		40-140	13		20
Dibenzo(a,h)anthracene	98		87		40-140	12		20
Indeno(1,2,3-cd)pyrene	100		89		40-140	12		20
Pyrene	85		77		40-140	10		20
Aniline	**29**	Q	**30**	Q	40-140	3		20
4-Chloroaniline	54		46		40-140	16		20
Dibenzofuran	73		67		40-140	9		20
2-Methylnaphthalene	70		64		40-140	9		20
Acetophenone	71		65		40-140	9		20
2,4,6-Trichlorophenol	82		71		30-130	14		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118447

Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 15-21,25 Batch: WG1487590-2 WG1487590-3								
2-Chlorophenol	71		66		30-130	7		20
2,4-Dichlorophenol	79		70		30-130	12		20
2,4-Dimethylphenol	55		55		30-130	0		20
2-Nitrophenol	101		91		30-130	10		20
4-Nitrophenol	77		65		30-130	17		20
2,4-Dinitrophenol	107		97		30-130	10		20
Pentachlorophenol	92		78		30-130	16		20
Phenol	47		45		30-130	4		20
2-Methylphenol	63		59		30-130	7		20
3-Methylphenol/4-Methylphenol	68		59		30-130	14		20
2,4,5-Trichlorophenol	85		73		30-130	15		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	68		68		15-110
Phenol-d6	59		55		15-110
Nitrobenzene-d5	79		74		30-130
2-Fluorobiphenyl	70		64		30-130
2,4,6-Tribromophenol	**126**	Q	109		15-110
4-Terphenyl-d14	90		79		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 15-21,25 Batch: WG1487591-2 WG1487591-3								
Acenaphthene	87		95		40-140	9		20
2-Chloronaphthalene	78		60		40-140	**26**	Q	20
Fluoranthene	102		97		40-140	5		20
Hexachlorobutadiene	68		64		40-140	6		20
Naphthalene	78		81		40-140	4		20
Benzo(a)anthracene	95		90		40-140	5		20
Benzo(a)pyrene	101		93		40-140	8		20
Benzo(b)fluoranthene	108		97		40-140	11		20
Benzo(k)fluoranthene	104		99		40-140	5		20
Chrysene	109		106		40-140	3		20
Acenaphthylene	78		61		40-140	**24**	Q	20
Anthracene	92		104		40-140	12		20
Benzo(ghi)perylene	115		92		40-140	**22**	Q	20
Fluorene	90		89		40-140	1		20
Phenanthrene	92		95		40-140	3		20
Dibenzo(a,h)anthracene	118		99		40-140	18		20
Indeno(1,2,3-cd)pyrene	110		94		40-140	16		20
Pyrene	104		100		40-140	4		20
2-Methylnaphthalene	78		65		40-140	18		20
Pentachlorophenol	93		96		30-130	3		20
Hexachlorobenzene	85		86		40-140	1		20
Hexachloroethane	74		62		40-140	18		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118447

Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 15-21,25 Batch: WG1487591-2 WG1487591-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	71		90		15-110
Phenol-d6	65		80		15-110
Nitrobenzene-d5	109		90		30-130
2-Fluorobiphenyl	76		58		30-130
2,4,6-Tribromophenol	110		101		15-110
4-Terphenyl-d14	109		105		30-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,14-15 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample												
Perfluorooctanesulfonamide (FOSA)	ND	36.1	30.3F	84		33.0F	90		46-170	9		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	361	390	108		417	113		10-185	7		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	361	427	118		414	113		10-202	3		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	361	361	100		361	98		10-209	0		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	361	357	99		390	106		66-176	9		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		46		10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		51		10-189
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	55		54		10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	60		56		10-161
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		70		10-112

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,14-15 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	0.525J	36.1	38.4	106		38.5	103		67-148	0		30
Perfluoropentanoic Acid (PFPeA)	ND	36.1	38.9	108		39.2	107		63-161	1		30
Perfluorobutanesulfonic Acid (PFBS)	ND	32	36.5	114		37.2	114		65-157	2		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	33.8	41.0	121		40.5	118		37-219	1		30
Perfluorohexanoic Acid (PFHxA)	0.443J	36.1	39.9	111		39.8	107		69-168	0		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	33.9	31.5	93		33.5	97		52-156	6		30
Perfluoroheptanoic Acid (PFHpA)	0.382J	36.1	39.4	109		39.5	106		58-159	0		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	33	33.7	102		34.5	103		69-177	2		30
Perfluorooctanoic Acid (PFOA)	2.95	36.1	41.6	115		43.3	110		63-159	4		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	34.4	40.0	116		43.0	123		49-187	7		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	34.4	38.5	112		39.5	113		61-179	3		30
Perfluorononanoic Acid (PFNA)	ND	36.1	41.0	114		40.3	110		68-171	2		30
Perfluorooctanesulfonic Acid (PFOS)	1.36J	33.5	37.4	112		37.9	107		52-151	1		30
Perfluorodecanoic Acid (PFDA)	ND	36.1	42.0	116		40.6	110		63-171	3		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	34.6	38.6	111		37.7	107		56-173	2		30
Perfluorononanesulfonic Acid (PFNS)	ND	34.7	35.4	102		34.6	98		48-150	2		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	36.1	41.5	115		44.6	121		60-166	7		30
Perfluoroundecanoic Acid (PFUnA)	ND	36.1	43.6	121		40.2	109		60-153	8		30
Perfluorodecanesulfonic Acid (PFDS)	ND	34.8	36.7	105		37.2	105		38-156	1		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	36.1	36.6	101		36.4	99		45-170	1		30
Perfluorododecanoic Acid (PFDoA)	ND	36.1	35.6	99		37.1	101		67-153	4		30
Perfluorotridecanoic Acid (PFTrDA)	ND	36.1	44.0	122		44.8	122		48-158	2		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,14-15 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample												
Perfluorotetradecanoic Acid (PFTA)	ND	36.1	41.6	115		41.8	114		59-182	0		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	722	867	120		678	92		57-162	24		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	34.1	36.8	108		36.8	106		69-143	0		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	36.1	33.6	93		31.5	86		40-167	6		30
Perfluorooctadecanoic Acid (PFODA)	ND	36.1	34.7	96		39.5F	107		10-119	13		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	34.9	44.2	126		45.5	128		85-154	3		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	34.8	34.2	98		36.1	102		81-188	5		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	33.6	28.4	84		28.2	82		55-158	1		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	34.1	26.4	78		25.6	74		52-156	3		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	142		159		10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	103		110		12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**158**	Q	**160**	Q	14-147
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	74		88		10-165
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86		80		27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	73		74		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	84		87		55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	84		87		62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77		79		57-129

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 03,14-15 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		83		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	99		100		71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	95		92		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	92		92		22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	120		114		10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	88		93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	78		82		62-163
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		94		69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		89		62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	82		84		59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81		85		70-131

MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 23-25 QC Batch ID: WG1487078-4 WG1487078-5 QC Sample: L2118447-24 Client ID: MW-SD45-04122021

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
1,4-Dioxane	0.331	4.63	5.98	122		6.02	123		30-140	1		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	36		38		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-07,09-13,22-24 QC Batch ID: WG1487517-4 WG1487517-5 QC Sample: L2118447-24 Client ID: MW-SD45-04122021												
1,2,4-Trichlorobenzene	ND	18.2	11	61		8.4	46		40-140	**27**	Q	20
Bis(2-chloroethyl)ether	ND	18.2	13	72		9.6	53		40-140	**30**	Q	20
1,2-Dichlorobenzene	ND	18.2	11	61		8.2	45		40-140	**29**	Q	20
1,3-Dichlorobenzene	ND	18.2	11	61		8.1	45		40-140	**30**	Q	20
1,4-Dichlorobenzene	ND	18.2	11	61		8.2	45		40-140	**29**	Q	20
3,3'-Dichlorobenzidine	ND	18.2	11	61		9.2	51		40-140	18		20
2,4-Dinitrotoluene	ND	18.2	14	77		12	66		40-140	15		20
2,6-Dinitrotoluene	ND	18.2	15	83		13	72		40-140	14		20
Azobenzene	ND	18.2	12	66		10	55		40-140	18		20
4-Bromophenyl phenyl ether	ND	18.2	12	66		10	55		40-140	18		20
Bis(2-chloroisopropyl)ether	ND	18.2	12	66		9.8	54		40-140	20		20
Bis(2-chloroethoxy)methane	ND	18.2	13	72		9.8	54		40-140	**28**	Q	20
Isophorone	ND	18.2	12	66		10	55		40-140	18		20
Nitrobenzene	ND	18.2	14	77		11	61		40-140	**24**	Q	20
Bis(2-ethylhexyl)phthalate	2.1J	18.2	16	88		14	77		40-140	13		20
Butyl benzyl phthalate	ND	18.2	15	83		13	72		40-140	14		20
Di-n-butylphthalate	ND	18.2	13	72		12	66		40-140	8		20
Di-n-octylphthalate	ND	18.2	16	88		15	83		40-140	6		20
Diethyl phthalate	ND	18.2	13	72		11	61		40-140	17		20
Dimethyl phthalate	ND	18.2	14	77		12	66		40-140	15		20
Aniline	ND	18.2	4.2	**23**	Q	3.5	**19**	Q	40-140	18		20
4-Chloroaniline	ND	18.2	5.1	**28**	Q	4.6J	**25**	Q	40-140	10		20
Dibenzofuran	ND	18.2	12	66		10	55		40-140	18		20

Matrix Spike Analysis
Batch Quality Control

Project Name:	NUCLEAR METALS	***Lab Number:***	L2118447
Project Number:	3252H	***Report Date:***	05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-07,09-13,22-24 QC Batch ID: WG1487517-4 WG1487517-5 QC Sample: L2118447-24 Client ID: MW-SD45-04122021												
Acetophenone	ND	18.2	12	66		9.5	52		40-140	**23**	Q	20
2,4,6-Trichlorophenol	ND	18.2	15	83		12	66		30-130	**22**	Q	20
2-Chlorophenol	ND	18.2	13	72		10	55		30-130	**26**	Q	20
2,4-Dichlorophenol	ND	18.2	14	77		11	61		30-130	**24**	Q	20
2,4-Dimethylphenol	ND	18.2	11	61		11	61		30-130	0		20
2-Nitrophenol	ND	18.2	17	94		14	77		30-130	19		20
4-Nitrophenol	ND	18.2	12	66		10	55		30-130	18		20
2,4-Dinitrophenol	ND	18.2	18J	99		16J	88		30-130	12		20
Phenol	ND	18.2	11	61		8.7	48		30-130	**23**	Q	20
2-Methylphenol	ND	18.2	13	72		10	55		30-130	**26**	Q	20
3-Methylphenol/4-Methylphenol	ND	18.2	14	77		11	61		30-130	**24**	Q	20
2,4,5-Trichlorophenol	ND	18.2	15	83		13	72		30-130	14		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	89		78		15-110
2-Fluorobiphenyl	77		63		30-130
2-Fluorophenol	81		64		15-110
4-Terphenyl-d14	73		65		30-130
Nitrobenzene-d5	82		62		30-130
Phenol-d6	72		58		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-07,09-13,22-24 QC Batch ID: WG1487520-4 WG1487520-5 QC Sample: L2118447-24 Client ID: MW-SD45-04122021												
Acenaphthene	ND	18.2	15	83		13	72		40-140	14		20
2-Chloronaphthalene	ND	18.2	17	94		15	83		40-140	13		20
Fluoranthene	ND	18.2	17	94		16	88		40-140	6		20
Hexachlorobutadiene	ND	18.2	15	83		12	66		40-140	**22**	Q	20
Naphthalene	ND	18.2	14	77		12	66		40-140	15		20
Benzo(a)anthracene	ND	18.2	16	88		14	77		40-140	13		20
Benzo(a)pyrene	ND	18.2	18	99		17	94		40-140	6		20
Benzo(b)fluoranthene	ND	18.2	14	77		13	72		40-140	7		20
Benzo(k)fluoranthene	ND	18.2	18	99		16	88		40-140	12		20
Chrysene	ND	18.2	16	88		15	83		40-140	6		20
Acenaphthylene	ND	18.2	16	88		14	77		40-140	13		20
Anthracene	ND	18.2	17	94		16	88		40-140	6		20
Benzo(ghi)perylene	ND	18.2	18	99		17	94		40-140	6		20
Fluorene	ND	18.2	16	88		14	77		40-140	13		20
Phenanthrene	ND	18.2	14	77		12	66		40-140	15		20
Dibenzo(a,h)anthracene	ND	18.2	19	100		18	99		40-140	5		20
Indeno(1,2,3-cd)pyrene	ND	18.2	18	99		17	94		40-140	6		20
Pyrene	ND	18.2	17	94		16	88		40-140	6		20
2-Methylnaphthalene	ND	18.2	15	83		13	72		40-140	14		20
Pentachlorophenol	ND	18.2	25	**140**	Q	23	130		30-130	8		20
Hexachlorobenzene	ND	18.2	16	88		14	77		40-140	13		20
Hexachloroethane	ND	18.2	12	66		9.6	53		40-140	**22**	Q	20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-07,09-13,22-24 QC Batch ID: WG1487520-4 WG1487520-5 QC Sample: L2118447-24 Client ID: MW-SD45-04122021

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	**169**	Q	**160**	Q	15-110
2-Fluorobiphenyl	89		79		30-130
2-Fluorophenol	94		78		15-110
4-Terphenyl-d14	96		88		30-130
Nitrobenzene-d5	81		67		30-130
Phenol-d6	80		68		15-110

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-01
Client ID: ML-3-1-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 09:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:25	44,353.2	MR
Nitrogen, Nitrate	0.12		mg/l	0.10	0.023	1	-	04/13/21 07:25	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.028	J	mg/l	0.050	0.013	1	-	04/20/21 01:41	44,300.0	SH
Chloride	13.3		mg/l	0.500	0.083	1	-	04/20/21 01:40	44,300.0	SH
Fluoride	0.088		mg/l	0.050	0.037	1	-	04/20/21 01:40	44,300.0	SH
Sulfate	9.33		mg/l	1.00	0.454	1	-	04/20/21 01:40	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-02
Client ID: MW-S35-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 09:40
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:26	44,353.2	MR
Nitrogen, Nitrate	8.4		mg/l	0.50	0.11	5	-	04/13/21 09:33	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-03
Client ID: MW-SD37-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 09:55
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:28	44,353.2	MR
Nitrogen, Nitrate	0.025	J	mg/l	0.10	0.023	1	-	04/13/21 09:38	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-04
Client ID: HA20-CMT-3I-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	9.00		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	161.		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:29	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/13/21 07:29	44,353.2	MR
Phosphorus, Total	0.366		mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:12	121,4500P-E	SD
Phosphorus, Orthophosphate	0.332		mg/l	0.005	0.001	1	-	04/13/21 03:16	121,4500P-E	AW
Dissolved Organic Carbon	28.		mg/l	10	0.43	10	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/20/21 01:51	44,300.0	SH
Chloride	58.0		mg/l	5.00	0.839	10	-	04/20/21 02:04	44,300.0	SH
Fluoride	1.02		mg/l	0.050	0.037	1	-	04/20/21 01:52	44,300.0	SH
Sulfate	302.		mg/l	10.0	4.54	10	-	04/20/21 02:04	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-05
Client ID: MW-BS25-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 10:10
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:30	44,353.2	MR
Nitrogen, Nitrate	0.058	J	mg/l	0.10	0.023	1	-	04/13/21 07:30	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-06
Client ID: MW-SD42A-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:15
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:31	44,353.2	MR
Nitrogen, Nitrate	0.068	J	mg/l	0.10	0.023	1	-	04/13/21 07:31	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-07
Client ID: BEW-2-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 10:30
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	222.		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:33	44,353.2	MR
Nitrogen, Nitrate	0.15		mg/l	0.10	0.023	1	-	04/13/21 07:33	44,353.2	MR
Phosphorus, Total	0.037		mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:13	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/13/21 03:16	121,4500P-E	AW
Dissolved Organic Carbon	0.53	J	mg/l	1.0	0.04	1	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.036	J	mg/l	0.050	0.013	1	-	04/20/21 02:16	44,300.0	SH
Chloride	7.78		mg/l	0.500	0.083	1	-	04/20/21 02:17	44,300.0	SH
Fluoride	0.148		mg/l	0.050	0.037	1	-	04/20/21 02:17	44,300.0	SH
Sulfate	56.6		mg/l	1.00	0.454	1	-	04/20/21 02:17	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-09
Client ID: HA20-CMT-4S-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 11:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:34	44,353.2	MR
Nitrogen, Nitrate	3.4		mg/l	0.10	0.023	1	-	04/13/21 07:34	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-10
Client ID: MW-S09-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 11:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:39	44,353.2	MR
Nitrogen, Nitrate	2.0		mg/l	0.10	0.023	1	-	04/13/21 07:39	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-11
Date Collected: 04/12/21 12:45
Client ID: MW-SD44-04122021
Date Received: 04/12/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:40	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/13/21 07:40	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-12
Client ID: HA20-CMT-3D2-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 12:40
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	197.		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	0.090		mg/l	0.050	0.014	1	-	04/13/21 07:42	44,353.2	MR
Nitrogen, Nitrate	2.2		mg/l	0.10	0.023	1	-	04/13/21 07:42	44,353.2	MR
Phosphorus, Total	0.081		mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:14	121,4500P-E	SD
Phosphorus, Orthophosphate	0.238		mg/l	0.005	0.001	1	-	04/13/21 03:17	121,4500P-E	AW
Dissolved Organic Carbon	86.		mg/l	10	0.43	10	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	1.25	0.330	25	-	04/20/21 02:28	44,300.0	SH
Chloride	103.		mg/l	12.5	2.10	25	-	04/20/21 02:41	44,300.0	SH
Fluoride	0.650		mg/l	0.050	0.037	1	-	04/20/21 02:29	44,300.0	SH
Sulfate	758.		mg/l	25.0	11.4	25	-	04/20/21 02:41	44,300.0	SH

Project Name: NUCLEAR METALS　　**Lab Number:** L2118447
Project Number: 3252H　　**Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-13　　Date Collected: 04/12/21 13:45
Client ID: MW-BS37-04122021　　Date Received: 04/12/21
Sample Location: CONCORD, MA　　Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:48	44,353.2	MR
Nitrogen, Nitrate	0.033	J	mg/l	0.10	0.023	1	-	04/13/21 07:48	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-15
Client ID: EQ BLANK1-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:00
Date Received: 04/12/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:58	44,353.2	MR
Nitrogen, Nitrate	0.027	J	mg/l	0.10	0.023	1	-	04/13/21 07:58	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:15	121,4500P-E	SD
Phosphorus, Orthophosphate	0.003	J	mg/l	0.005	0.001	1	-	04/13/21 03:17	121,4500P-E	AW
Dissolved Organic Carbon	0.19	J	mg/l	1.0	0.04	1	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/20/21 04:04	44,300.0	SH
Chloride	0.208	J	mg/l	0.500	0.083	1	-	04/20/21 04:05	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/20/21 04:05	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/20/21 04:05	44,300.0	SH

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118447-16	Date Collected:	04/12/21 14:20
Client ID:	MW-SD64-04122021	Date Received:	04/12/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Alkalinity, Bicarbonate	21.0		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 08:00	44,353.2	MR
Nitrogen, Nitrate	1.7		mg/l	0.10	0.023	1	-	04/13/21 08:00	44,353.2	MR
Phosphorus, Total	0.005	J	mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 13:16	121,4500P-E	SD
Phosphorus, Orthophosphate	0.004	J	mg/l	0.005	0.001	1	-	04/13/21 03:17	121,4500P-E	AW
Dissolved Organic Carbon	0.56	J	mg/l	1.0	0.04	1	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.045	J	mg/l	0.050	0.013	1	-	04/20/21 03:16	44,300.0	SH
Chloride	61.8		mg/l	2.50	0.420	5	-	04/20/21 03:29	44,300.0	SH
Fluoride	0.074		mg/l	0.050	0.037	1	-	04/20/21 03:17	44,300.0	SH
Sulfate	15.4		mg/l	1.00	0.454	1	-	04/20/21 03:17	44,300.0	SH

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-17
Client ID: MW-SD10-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 14:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 08:01	44,353.2	MR
Nitrogen, Nitrate	0.43		mg/l	0.10	0.023	1	-	04/13/21 08:01	44,353.2	MR

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118447

Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-18
Client ID: MW-SD10-04122021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/12/21 14:25
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 08:02	44,353.2	MR
Nitrogen, Nitrate	0.43		mg/l	0.10	0.023	1	-	04/13/21 08:02	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2118447
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-19
Client ID: P-4-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 15:10
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 08:04	44,353.2	MR
Nitrogen, Nitrate	2.1		mg/l	0.10	0.023	1	-	04/13/21 08:04	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-20
Client ID: HA20-CMT-4I-04122021
Sample Location: CONCORD, MA
Date Collected: 04/12/21 15:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 08:05	44,353.2	MR
Nitrogen, Nitrate	0.027	J	mg/l	0.10	0.023	1	-	04/13/21 08:05	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-21
Client ID: MW-S03-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.030	J	mg/l	0.050	0.014	1	-	04/13/21 08:06	44,353.2	MR
Nitrogen, Nitrate	6.5		mg/l	0.10	0.023	1	-	04/13/21 08:06	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2118447
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-22
Client ID: MW-S26-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 15:50
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 08:07	44,353.2	MR
Nitrogen, Nitrate	0.70		mg/l	0.10	0.023	1	-	04/13/21 08:07	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-23
Client ID: MW-BS26-04122021
Sample Location: CONCORD, MA

Date Collected: 04/12/21 13:20
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 08:13	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/13/21 08:13	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/20/21 03:40	44,300.0	SH
Chloride	167.		mg/l	5.00	0.839	10	-	04/20/21 03:53	44,300.0	SH
Fluoride	0.104		mg/l	0.050	0.037	1	-	04/20/21 03:41	44,300.0	SH
Sulfate	32.2		mg/l	1.00	0.454	1	-	04/20/21 03:41	44,300.0	SH

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-24
Date Collected: 04/12/21 15:25
Client ID: MW-SD45-04122021
Date Received: 04/12/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 08:14	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/13/21 08:14	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2118447
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118447-25
Date Collected: 04/12/21 16:05
Client ID: MW-S37-04122021
Date Received: 04/12/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 08:20	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/13/21 08:20	44,353.2	MR

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 04,07,12,15-16 Batch: WG1485430-1										
Phosphorus, Orthophosphate	0.001	J	mg/l	0.005	0.001	1	-	04/13/21 03:14	121,4500P-E	AW
General Chemistry - Westborough Lab for sample(s): 01-07,09-10,12 Batch: WG1485436-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/13/21 06:49	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-07,09-10,12 Batch: WG1485437-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 06:52	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 11,13,15-20,23 Batch: WG1485438-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/13/21 06:54	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 11,13,15-20,23 Batch: WG1485439-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 06:57	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 21-22,24-25 Batch: WG1485440-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/13/21 06:59	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 21-22,24-25 Batch: WG1485441-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/13/21 07:06	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 04,07,12,15-16 Batch: WG1487001-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/16/21 10:20	04/19/21 12:57	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 04,07,12,15-16 Batch: WG1487163-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 04,07,12,15-16 Batch: WG1487172-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/19/21 13:46	121,2320B	JB
Anions by Ion Chromatography - Westborough Lab for sample(s): 01,04,07,12,15-16,23 Batch: WG1488181-1										
Chloride	0.213	J	mg/l	0.500	0.083	1	-	04/20/21 01:04	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/20/21 01:04	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/20/21 01:04	44,300.0	SH
General Chemistry - Westborough Lab for sample(s): 04,07,12,15-16 Batch: WG1488722-1										
Dissolved Organic Carbon	0.05	J	mg/l	1.0	0.04	1	-	04/21/21 05:42	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 01,04,12,15-16,23 Batch: WG1502651-1										
Bromide	ND		mg/l	0.050	0.013	1	-	04/19/21 16:57	44,300.0	SH
Anions by Ion Chromatography - Westborough Lab for sample(s): 07 Batch: WG1503279-1										
Bromide	ND		mg/l	0.050	0.013	1	-	04/19/21 16:57	44,300.0	SH

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04,07,12,15-16 Batch: WG1485430-2								
Phosphorus, Orthophosphate	94		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-07,09-10,12 Batch: WG1485436-2								
Nitrogen, Nitrate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-07,09-10,12 Batch: WG1485437-2								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 11,13,15-20,23 Batch: WG1485438-2								
Nitrogen, Nitrate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 11,13,15-20,23 Batch: WG1485439-2								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 21-22,24-25 Batch: WG1485440-2								
Nitrogen, Nitrate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 21-22,24-25 Batch: WG1485441-2								
Nitrogen, Nitrite	102		-		90-110	-		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04,07,12,15-16 Batch: WG1487001-2					
Phosphorus, Total	95	-	80-120	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,04,07,12,15-16,23 Batch: WG1488181-2					
Chloride	102	-	90-110	-	
Fluoride	98	-	90-110	-	
Sulfate	98	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 04,07,12,15-16 Batch: WG1488722-2					
Dissolved Organic Carbon	98	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,04,12,15-16,23 Batch: WG1502651-2					
Bromide	99	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 07 Batch: WG1503279-2					
Bromide	99	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04,07,12,15-16 QC Batch ID: WG1485430-4 QC Sample: L2118447-16 Client ID: MW-SD64-04122021												
Phosphorus, Orthophosphate	0.004J	0.5	0.496	99		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-07,09-10,12 QC Batch ID: WG1485436-4 QC Sample: L2118447-12 Client ID: HA20-CMT-3D2-04122021												
Nitrogen, Nitrate	2.2	4	6.2	100		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01-07,09-10,12 QC Batch ID: WG1485437-4 QC Sample: L2118447-12 Client ID: HA20-CMT-3D2-04122021												
Nitrogen, Nitrite	0.090	4	4.9	120		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 11,13,15-20,23 QC Batch ID: WG1485438-4 QC Sample: L2118447-13 Client ID: MW-BS37-04122021												
Nitrogen, Nitrate	0.033J	4	4.1	102		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 11,13,15-20,23 QC Batch ID: WG1485439-4 QC Sample: L2118447-13 Client ID: MW-BS37-04122021												
Nitrogen, Nitrite	ND	4	4.8	120		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 21-22,24-25 QC Batch ID: WG1485440-4 QC Sample: L2118447-24 Client ID: MW-SD45-04122021												
Nitrogen, Nitrate	ND	4	4.0	100		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 21-22,24-25 QC Batch ID: WG1485441-4 QC Sample: L2118447-24 Client ID: MW-SD45-04122021												
Nitrogen, Nitrite	ND	4	4.8	120		-	-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,04,07,12,15-16,23 QC Batch ID: WG1488181-3 QC Sample: L2118447-01 Client ID: ML-3-1-04122021										
Chloride	13.3	4	17.1	95		-	-	90-110	-	18
Fluoride	0.088	0.4	0.409	**80**	Q	-	-	90-110	-	15
Sulfate	9.33	8	16.2	**86**	Q	-	-	90-110	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04,07,12,15-16 QC Batch ID: WG1485430-3 QC Sample: L2118447-16 Client ID: MW-SD64-04122021						
Phosphorus, Orthophosphate	0.004J	0.004J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-07,09-10,12 QC Batch ID: WG1485436-3 QC Sample: L2118447-12 Client ID: HA20-CMT-3D2-04122021						
Nitrogen, Nitrate	2.2	2.2	mg/l	0		6
General Chemistry - Westborough Lab Associated sample(s): 01-07,09-10,12 QC Batch ID: WG1485437-3 QC Sample: L2118447-12 Client ID: HA20-CMT-3D2-04122021						
Nitrogen, Nitrite	0.090	0.087	mg/l	3		20
General Chemistry - Westborough Lab Associated sample(s): 11,13,15-20,23 QC Batch ID: WG1485438-3 QC Sample: L2118447-13 Client ID: MW-BS37-04122021						
Nitrogen, Nitrate	0.033J	ND	mg/l	NC		6
General Chemistry - Westborough Lab Associated sample(s): 11,13,15-20,23 QC Batch ID: WG1485439-3 QC Sample: L2118447-13 Client ID: MW-BS37-04122021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 21-22,24-25 QC Batch ID: WG1485440-3 QC Sample: L2118447-24 Client ID: MW-SD45-04122021						
Nitrogen, Nitrate	ND	ND	mg/l	NC		6
General Chemistry - Westborough Lab Associated sample(s): 21-22,24-25 QC Batch ID: WG1485441-3 QC Sample: L2118447-24 Client ID: MW-SD45-04122021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,04,07,12,15-16,23 QC Batch ID: WG1488181-4 QC Sample: L2118447-01 Client ID: ML-3-1-04122021					
Chloride	13.3	13.3	mg/l	0	18
Fluoride	0.088	0.088	mg/l	0	15
Sulfate	9.33	9.32	mg/l	0	20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent
E	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118447-01A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-01B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-01C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-01G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-01H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-01I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-01J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-01N	Plastic 250ml unpreserved	B	7	7	4.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-01O	Plastic 250ml unpreserved	B	7	7	4.2	Y	Absent		SO4-300(28),CL-300(28),F-300(28)
L2118447-02A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-02B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-02C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-02G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-02H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-02I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-02J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-02N	Plastic 250ml unpreserved	B	7	7	4.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-03A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-03B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118447-03C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-03G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-03H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-03I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-03J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-03K	Plastic 250ml unpreserved	E	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2118447-03L	Plastic 250ml unpreserved	E	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2118447-03N	Plastic 250ml unpreserved	B	7	7	4.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-04A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-04B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-04C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-04D	Vial H2SO4 preserved	B	NA		4.2	Y	Absent		DOC-9060(28)
L2118447-04E	Vial H2SO4 preserved	B	NA		4.2	Y	Absent		DOC-9060(28)
L2118447-04F	Vial H2SO4 preserved	B	NA		4.2	Y	Absent		DOC-9060(28)
L2118447-04G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-04H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-04I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-04J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-04M	Plastic 250ml unpreserved/No Headspace	B	NA		4.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118447-04N	Plastic 120ml unpreserved	B	7	7	4.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-04O	Plastic 250ml unpreserved	B	7	7	4.2	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28)
L2118447-04Q	Plastic 250ml H2SO4 preserved	B	<2	<2	4.2	Y	Absent		TPHOS-4500(28)
L2118447-05A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-05B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-05C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-05G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-05H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-05I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118447-05J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-05N	Plastic 120ml unpreserved	B	7	7	4.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-06A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-06B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-06C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-06G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-06H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-06I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-06J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-06N	Plastic 120ml unpreserved	B	7	7	4.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-07A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-07B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-07C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-07D	Vial H2SO4 preserved	B	NA		4.2	Y	Absent		DOC-9060(28)
L2118447-07E	Vial H2SO4 preserved	B	NA		4.2	Y	Absent		DOC-9060(28)
L2118447-07F	Vial H2SO4 preserved	B	NA		4.2	Y	Absent		DOC-9060(28)
L2118447-07G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-07H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-07I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-07J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-07M	Plastic 250ml unpreserved/No Headspace	B	NA		4.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118447-07O	Plastic 500ml unpreserved	B	7	7	4.2	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2118447-07Q	Plastic 250ml H2SO4 preserved	B	<2	<2	4.2	Y	Absent		TPHOS-4500(28)
L2118447-08A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-08B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-09A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-09B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-09C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118447-09G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-09H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-09I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-09J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-09N	Plastic 120ml unpreserved	B	7	7	4.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-10A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-10B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-10C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-10G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-10H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-10I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-10J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-10N	Plastic 120ml unpreserved	B	7	7	4.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-11A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-11B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-11C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-11G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-11H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-11I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-11J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-11N	Plastic 120ml unpreserved	B	7	7	4.2	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-12A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-12B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-12C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-12D	Vial H2SO4 preserved	B	NA		4.2	Y	Absent		DOC-9060(28)
L2118447-12E	Vial H2SO4 preserved	B	NA		4.2	Y	Absent		DOC-9060(28)
L2118447-12F	Vial H2SO4 preserved	B	NA		4.2	Y	Absent		DOC-9060(28)
L2118447-12G	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118447-12H	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-12I	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-12J	Amber 250ml unpreserved	B	7	7	4.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-12M	Plastic 250ml unpreserved/No Headspace	B	NA		4.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118447-12O	Plastic 500ml unpreserved	B	7	7	4.2	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118447-12Q	Plastic 250ml H2SO4 preserved	B	<2	<2	4.2	Y	Absent		TPHOS-4500(28)
L2118447-13A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-13B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-13C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-13G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-13H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-13I	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-13J	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-13N	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-14K	Plastic 250ml unpreserved	E	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2118447-15A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-15B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-15C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-15D	Vial H2SO4 preserved	C	NA		4.0	Y	Absent		DOC-9060(28)
L2118447-15E	Vial H2SO4 preserved	C	NA		4.0	Y	Absent		DOC-9060(28)
L2118447-15F	Vial H2SO4 preserved	C	NA		4.0	Y	Absent		DOC-9060(28)
L2118447-15G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-15H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-15I	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-15J	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-15K	Plastic 250ml unpreserved	E	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2118447-15L	Plastic 250ml unpreserved	E	NA		4.1	Y	Absent		A2-537-ISOTOPE-36(14)
L2118447-15M	Plastic 250ml unpreserved/No Headspace	C	NA		4.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118447-15N	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-15O	Plastic 250ml unpreserved	C	7	7	4.0	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28)
L2118447-15Q	Plastic 250ml H2SO4 preserved	C	<2	<2	4.0	Y	Absent		TPHOS-4500(28)
L2118447-16A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-16B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-16C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-16D	Vial H2SO4 preserved	C	NA		4.0	Y	Absent		DOC-9060(28)
L2118447-16E	Vial H2SO4 preserved	C	NA		4.0	Y	Absent		DOC-9060(28)
L2118447-16F	Vial H2SO4 preserved	C	NA		4.0	Y	Absent		DOC-9060(28)
L2118447-16G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-16H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-16I	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-16J	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-16M	Plastic 250ml unpreserved/No Headspace	C	NA		4.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118447-16O	Plastic 500ml unpreserved	C	7	7	4.0	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2118447-16Q	Plastic 250ml H2SO4 preserved	C	<2	<2	4.0	Y	Absent		TPHOS-4500(28)
L2118447-17A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-17B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-17C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-17G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-17H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-17I	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-17J	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-17N	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-18A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-18B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-18C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-18G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118447-18H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-18I	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-18J	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-18N	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-19A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-19B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-19C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-19G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-19H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-19I	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-19J	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-19N	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-20A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-20B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-20C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-20G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-20H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-20I	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-20J	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-20N	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-21A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-21B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-21C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-21G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-21H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-21I	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-21J	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-21N	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118447-22A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-22B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-22C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-22G	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-22H	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-22I	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-22J	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-22N	Plastic 120ml unpreserved	A	7	7	2.3	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-23A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-23B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-23C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-23G	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-23H	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-23I	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-23J	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-23N	Plastic 500ml unpreserved	A	7	7	2.3	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-23O	Plastic 120ml unpreserved	A	7	7	2.3	Y	Absent		SO4-300(28),F-300(28),CL-300(28)
L2118447-24A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-24A1	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-24A2	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-24B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-24B2	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-24C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-24C1	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-24C2	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-24G	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-24G1	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-24G2	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118447
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118447-24H	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-24H1	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-24H2	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-24I	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-24I1	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-24I2	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-24J	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-24J1	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-24J2	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-24N	Plastic 120ml unpreserved	A	7	7	2.3	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-24N1	Plastic 120ml unpreserved	A	7	7	2.3	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-24N2	Plastic 120ml unpreserved	A	7	7	2.3	Y	Absent		NO2-353(2),NO3-353(2)
L2118447-25A	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-25B	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-25C	Vial HCl preserved	D	NA		3.7	Y	Absent		MCP-8260-10(14)
L2118447-25G	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-25H	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118447-25I	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-25J	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118447-25N	Plastic 120ml unpreserved	A	7	7	2.3	Y	Absent		NO2-353(2),NO3-353(2)

*Values in parentheses indicate holding time in days

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118447
Project Number:	3252H	**Report Date:**	05/25/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: *DU Report with 'J' Qualifiers*

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF COUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/12/21

ALPHA Job #: L2118447

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING

Filtration

☒ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
18447 -01	ML-3-1-04122021	4/12/21	9:20	GW	PB	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
02	MW-S35-04122021	4/12/21	9:40	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
03	MW-SD37-04122021	4/12/21	9:55	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
04	HA20-CMT-3I-04122021	4/12/21	10:00	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
05	MW-BS25-04122021	4/12/21	10:10	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
06	MW-SD42A-04122021	4/12/21	10:15	GW	ZM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
07	BEW-2-04122021	4/12/21	10:30	GW	SRB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
08	Trip Blank1-04122021	3/30/21	–	TB	PC	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		2
09	HA20-CMT-4S-04122021	4/12/21	11:00	GW	SRP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
10	MW-S09-04122021	4/12/21	11:25	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/12/21 1645	[signature]	4/12/21 1645
[signature]	4/12/21 1740	[signature]	4/12/21 1740

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 9-JAN-15)

CHAIN OF COUNTERPARTS

PAGE 2 OF 3

ALPHA ANALYTICAL
World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/12/21

ALPHA Job #: L2118447

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

SAMPLE HANDLING

Filtration

☒ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
18447-11	MW-SD44-04122021	4/12/21	12:45	GW	ZM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
12	HA20-CMT-3D2-04122021	4/12/21	12:40	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
13	MW-BS37-04122021	4/12/21	12:40	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		9
14	Field Blank1-04122021	4/12/21	14:45	FB	NH	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐		2
15	EQ Blank1-04122021	4/12/21	15:00	EQ	NH	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
16	MW-SD64-04122021	4/12/21	14:20	GW	SRB	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
17	MW-SD10-04122021	4/12/21	14:20	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
18	MW-SD10-04122021DUP	4/12/21	14:25	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
19	P-4-04122021	4/12/21	15:10	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
20	HA20-CMT-4I-04122021	4/12/21	15:00	GW	SRP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/12/21 1645	TZ AAL	4-12-21 16:45
TZ AAL	4-12-21 1740	[signature]	4/12/21 1740

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF COSTODY

CHAIN OF CUSTODY

PAGE 3 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/12/21

ALPHA Job #: L2118447

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING

Filtration

☒ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
18447-21	MW-S03-04122021	4/12/21	16:00	GW	SRB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
22	MW-S26-04122021	4/12/21	15:50	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		6
23	MW-BS26-04122021	4/12/21	13:20	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		9
24	MW-SD45-04122021	4/12/21	15:25	GW	ZM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	MS/MSD	24
25	MW-S37-04122021	4/12/21	16:05	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		6
Container Type						V	A	A	P	P	P	V	P	P	P	-	-		
Preservative						B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
	4/12/21 1645	AAL	4/12/21 1645
AAL	4/12/21 1741		4/12/21 1740

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118447**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487779-5**	**Lab File ID**	**: J210418A06**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/18/21 04:59**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487779-3LCS	WG1487779-3	04/18/21 03:37
WG1487779-4LCSD	WG1487779-4	04/18/21 04:18
TRIP BLANK1-04122021	L2118447-08	04/18/21 08:26

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**		**Lab Number**	**: L2118447**
Project Name	**: NUCLEAR METALS**		**Project Number**	**: 3252H**
Lab Sample ID	**: WG1489835-5**		**Lab File ID**	**: VQ210423A04**
Instrument ID	**: QUIMBY**			
Matrix	**: WATER**		**Analysis Date**	**: 04/23/21 06:11**

Client Sample No.	Lab Sample ID	Analysis Date
WG1489835-3LCS	WG1489835-3	04/23/21 04:40
WG1489835-4LCSD	WG1489835-4	04/23/21 05:10
HA20-CMT-3I-04122021	L2118447-04	04/23/21 06:41
HA20-CMT-3D2-04122021	L2118447-12	04/23/21 07:11
ML-3-1-04122021	L2118447-01	04/23/21 07:41
MW-S35-04122021	L2118447-02	04/23/21 08:40
MW-SD37-04122021	L2118447-03	04/23/21 09:10
MW-BS25-04122021	L2118447-05	04/23/21 09:40
MW-SD42A-04122021	L2118447-06	04/23/21 10:11
BEW-2-04122021	L2118447-07	04/23/21 10:41
MW-S09-04122021	L2118447-10	04/23/21 11:42
MW-SD44-04122021	L2118447-11	04/23/21 12:12
MW-BS37-04122021	L2118447-13	04/23/21 12:42
EQ BLANK1-04122021	L2118447-15	04/23/21 13:12
MW-SD64-04122021	L2118447-16	04/23/21 13:43
MW-SD10-04122021	L2118447-17	04/23/21 14:13

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118447**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1490394-5**	**Lab File ID**	**: J210423B06**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/24/21 03:49**

Client Sample No.	Lab Sample ID	Analysis Date
WG1490394-3LCS	WG1490394-3	04/24/21 02:27
WG1490394-4LCSD	WG1490394-4	04/24/21 03:08
MW-SD45-04122021	L2118447-24	04/24/21 05:53
HA20-CMT-4S-04122021	L2118447-09	04/24/21 06:34
MW-SD10-04122021 DUP	L2118447-18	04/24/21 07:15
P-4-04122021	L2118447-19	04/24/21 07:56
HA20-CMT-4I-04122021	L2118447-20	04/24/21 08:37
MW-S03-04122021	L2118447-21	04/24/21 09:18
MW-S26-04122021	L2118447-22	04/24/21 09:59
MW-BS26-04122021	L2118447-23	04/24/21 10:39
MW-S37-04122021	L2118447-25	04/24/21 11:20
MW-SD45-04122021MS	WG1490394-6	04/24/21 12:42
MW-SD45-04122021MSD	WG1490394-7	04/24/21 13:23

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2118447		
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H		
Instrument ID	: JACK	**Calibration Date**	: 04/18/21 03:37		
Lab File ID	: J210418A02	**Init. Calib. Date(s)**	: 04/06/21	04/06/21	
Sample No	: WG1487779-2	**Init. Calib. Times**	: 06:30	15:24	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	75	0
Dichlorodifluoromethane	0.988	1.086	-	-9.9	20	70	0
Chloromethane	1.815	2.136	-	-17.7	20	79	0
Vinyl chloride	2.051	2.277	-	-11	20	73	0
Bromomethane	10	10.67	-	-6.7	20	69	0
Chloroethane	1.105	1.395	-	-26.2*	20	83	0
Trichlorofluoromethane	1.917	2.079	-	-8.5	20	74	0
Ethyl ether	0.807	0.853	-	-5.7	20	74	0
1,1-Dichloroethene	1.166	1.277	-	-9.5	20	76	0
Carbon disulfide	3.943	4.577	-	-16.1	20	79	0
Freon-113	1.185	1.343	-	-13.3	20	80	0
Acrolein	0.199	0.243	-	-22.1*	20	83	-.01
Methylene chloride	1.4	1.617	-	-15.5	20	80	0
Acetone	0.45	0.612	-	-36*	20	92	0
trans-1,2-Dichloroethene	1.251	1.39	-	-11.1	20	77	0
Methyl acetate	1.243	1.615	-	-29.9*	20	91	0
Methyl tert-butyl ether	3.987	4.116	-	-3.2	20	73	0
tert-Butyl alcohol	0.133	0.148	-	-11.3	20	77	0
Diisopropyl ether	5.638	6.606	-	-17.2	20	82	0
1,1-Dichloroethane	3	3.704	-	-23.5*	20	83	0
Halothane	0.888	1.004	-	-13.1	20	79	0
Acrylonitrile	0.612	0.728	-	-19	20	83	0
Ethyl tert-butyl ether	4.868	5.124	-	-5.3	20	74	0
Vinyl acetate	4.411	5.182	-	-17.5	20	83	0
cis-1,2-Dichloroethene	1.456	1.572	-	-8	20	75	0
2,2-Dichloropropane	2.152	2.583	-	-20	20	84	0
Bromochloromethane	0.558	0.631	-	-13.1	20	79	0
Cyclohexane	3.001	3.608	-	-20.2*	20	84	0
Chloroform	2.538	2.963	-	-16.7	20	84	0
Ethyl acetate	1.761	1.915	-	-8.7	20	78	0
Carbon tetrachloride	10	11.32	-	-13.2	20	84	0
Tetrahydrofuran	0.488	0.641	-	-31.4*	20	84	-.02
Dibromofluoromethane	0.222	0.255	-	-14.9	20	84	0
1,1,1-Trichloroethane	2.006	2.335	-	-16.4	20	81	0
2-Butanone	0.78	0.969	-	-24.2*	20	86	0
1,1-Dichloropropene	2.054	2.293	-	-11.6	20	78	0
Benzene	6.159	6.753	-	-9.6	20	76	0
tert-Amyl methyl ether	4.072	3.926	-	3.6	20	70	0
1,2-Dichloroethane-d4	0.391	0.429	-	-9.7	20	85	0
1,2-Dichloroethane	2.102	2.535	-	-20.6*	20	83	0
Methyl cyclohexane	2.764	2.869	-	-3.8	20	73	0
Trichloroethene	1.41	1.514	-	-7.4	20	75	0
Dibromomethane	0.835	0.907	-	-8.6	20	77	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118447		
Project Name	: NUCLEAR METALS	Project Number	: 3252H		
Instrument ID	: JACK	Calibration Date	: 04/18/21 03:37		
Lab File ID	: J210418A02	Init. Calib. Date(s)	: 04/06/21	04/06/21
Sample No	: WG1487779-2	Init. Calib. Times	: 06:30	15:24
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	1.7	2.033	-	-19.6	20	83	0
2-Chloroethyl vinyl ether	1.061	1.031	-	2.8	20	71	0
Bromodichloromethane	1.958	2.254	-	-15.1	20	81	0
1,4-Dioxane	0.012	0.015*	-	-25*	20	82	-.01
cis-1,3-Dichloropropene	2.539	2.825	-	-11.3	20	79	0
Chlorobenzene-d5	1	1	-	0	20	73	0
Toluene-d8	1.312	1.362	-	-3.8	20	75	0
Toluene	4.715	5.083	-	-7.8	20	74	0
4-Methyl-2-pentanone	0.788	0.765	-	2.9	20	72	0
Tetrachloroethene	1.54	1.623	-	-5.4	20	76	0
trans-1,3-Dichloropropene	3.013	3.477	-	-15.4	20	79	0
Ethyl methacrylate	2.61	2.636	-	-1	20	73	0
1,1,2-Trichloroethane	1.482	1.678	-	-13.2	20	79	0
Chlorodibromomethane	1.493	1.619	-	-8.4	20	79	0
1,3-Dichloropropane	3.15	3.451	-	-9.6	20	76	0
1,2-Dibromoethane	1.509	1.54	-	-2.1	20	74	0
2-Hexanone	1.508	1.568	-	-4	20	79	0
Chlorobenzene	4.887	5.085	-	-4.1	20	74	0
Ethylbenzene	9.17	10.088	-	-10	20	75	0
1,1,1,2-Tetrachloroethane	1.509	1.604	-	-6.3	20	76	0
p/m Xylene	3.495	3.754	-	-7.4	20	75	0
o Xylene	3.273	3.532	-	-7.9	20	74	0
Styrene	5.609	6.246	-	-11.4	20	77	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	75	0
Bromoform	1.961	1.884	-	3.9	20	81	0
Isopropylbenzene	17.13	17.362	-	-1.4	20	74	0
4-Bromofluorobenzene	1.017	0.989	-	2.8	20	74	0
Bromobenzene	3.526	3.431	-	2.7	20	78	0
n-Propylbenzene	23.023	24.113	-	-4.7	20	74	0
1,4-Dichlorobutane	6.731	7.901	-	-17.4	20	81	0
1,1,2,2-Tetrachloroethane	10	12.106	-	-21.1*	20	76	0
4-Ethyltoluene	16.526	17.425	-	-5.4	20	75	0
2-Chlorotoluene	14.927	16.165	-	-8.3	20	77	0
1,3,5-Trimethylbenzene	14.394	14.661	-	-1.9	20	75	0
1,2,3-Trichloropropane	3.663	4.009	-	-9.4	20	73	0
trans-1,4-Dichloro-2-buten	1.458	1.585	-	-8.7	20	75	0
4-Chlorotoluene	13.502	14.357	-	-6.3	20	77	0
tert-Butylbenzene	11.747	11.943	-	-1.7	20	74	0
1,2,4-Trimethylbenzene	14.075	14.284	-	-1.5	20	74	0
sec-Butylbenzene	17.271	17.867	-	-3.5	20	74	0
p-Isopropyltoluene	14.764	14.681	-	0.6	20	73	0
1,3-Dichlorobenzene	7.29	7.525	-	-3.2	20	78	0
1,4-Dichlorobenzene	7.245	7.371	-	-1.7	20	78	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2118447		
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H		
Instrument ID	: JACK	**Calibration Date**	: 04/18/21 03:37		
Lab File ID	: J210418A02	**Init. Calib. Date(s)**	: 04/06/21	04/06/21	
Sample No	: WG1487779-2	**Init. Calib. Times**	: 06:30	15:24	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	8.496	8.257	-	2.8	20	73	0
n-Butylbenzene	15.567	16.396	-	-5.3	20	75	0
1,2-Dichlorobenzene	6.684	6.789	-	-1.6	20	77	0
1,2,4,5-Tetramethylbenzene	12.111	10.895	-	10	20	69	0
1,2-Dibromo-3-chloropropan	0.522	0.547	-	-4.8	20	80	0
1,3,5-Trichlorobenzene	4.178	4.113	-	1.6	20	80	0
Hexachlorobutadiene	1.414	1.471	-	-4	20	85	0
1,2,4-Trichlorobenzene	3.612	3.371	-	6.7	20	79	0
Naphthalene	11.584	10.713	-	7.5	20	74	0
1,2,3-Trichlorobenzene	3.388	3.248	-	4.1	20	80	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118447**	
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**	
Instrument ID	**: QUIMBY**	**Calibration Date**	**: 04/23/21 04:40**	
Lab File ID	**: VQ210423A01**	**Init. Calib. Date(s)**	**: 04/11/21**	**04/11/21**
Sample No	**: WG1489835-2**	**Init. Calib. Times**	**: 16:44**	**21:47**
Channel	**:**			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	63	0
Dichlorodifluoromethane	0.715	0.807	-	-12.9	20	65	0
Chloromethane	1.089	1.084	-	0.5	20	59	0
Vinyl chloride	0.844	0.732	-	13.3	20	50	0
Bromomethane	0.461	0.51	-	-10.6	20	66	0
Chloroethane	0.521	0.42	-	19.4	20	47	0
Trichlorofluoromethane	1.198	1.427	-	-19.1	20	70	0
Ethyl ether	0.275	0.24	-	12.7	20	53	0
1,1-Dichloroethene	0.654	0.614	-	6.1	20	56	0
Carbon disulfide	1.842	1.533	-	16.8	20	50	0
Methylene chloride	0.709	0.67	-	5.5	20	56	0
Acetone	10	11.456	-	-14.6	20	72	0
trans-1,2-Dichloroethene	0.781	0.736	-	5.8	20	56	0
Methyl tert-butyl ether	1.417	1.518	-	-7.1	20	67	0
Diisopropyl ether	2.883	3.152	-	-9.3	20	67	0
1,1-Dichloroethane	1.547	1.5	-	3	20	58	0
Ethyl tert-butyl ether	2.062	2.195	-	-6.5	20	65	0
cis-1,2-Dichloroethene	0.828	0.814	-	1.7	20	59	0
2,2-Dichloropropane	1.253	1.462	-	-16.7	20	70	0
Bromochloromethane	0.339	0.389	-	-14.7	20	68	0
Chloroform	1.426	1.434	-	-0.6	20	60	0
Carbon tetrachloride	1.277	1.514	-	-18.6	20	70	0
Tetrahydrofuran	0.171	0.188	-	-9.9	20	69	0
Dibromofluoromethane	0.291	0.308	-	-5.8	20	66	0
1,1,1-Trichloroethane	1.461	1.627	-	-11.4	20	67	0
2-Butanone	0.19	0.212	-	-11.6	20	67	0
1,1-Dichloropropene	1.115	1.102	-	1.2	20	59	0
Benzene	3.027	2.806	-	7.3	20	55	0
tert-Amyl methyl ether	1.521	1.521	-	0	20	62	0
1,2-Dichloroethane-d4	0.282	0.325	-	-15.2	20	75	0
1,2-Dichloroethane	0.858	1.015	-	-18.3	20	72	0
Trichloroethene	0.896	0.86	-	4	20	60	0
Dibromomethane	0.344	0.349	-	-1.5	20	61	-.01
1,2-Dichloropropane	0.753	0.702	-	6.8	20	56	0
Bromodichloromethane	0.987	1.014	-	-2.7	20	62	0
1,4-Dioxane	0.00307	0.00292*	-	4.9	20	59	0
cis-1,3-Dichloropropene	1.059	1.062	-	-0.3	20	61	0
Chlorobenzene-d5	1	1	-	0	20	62	-.01
Toluene-d8	1.077	1.007	-	6.5	20	59	-.01
Toluene	1.629	1.517	-	6.9	20	55	-.01
4-Methyl-2-pentanone	10	8.784	-	12.2	20	61	0
Tetrachloroethene	0.709	0.83	-	-17.1	20	70	0
trans-1,3-Dichloropropene	0.736	0.736	-	0	20	62	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2118447		
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H		
Instrument ID	: QUIMBY	**Calibration Date**	: 04/23/21 04:40		
Lab File ID	: VQ210423A01	**Init. Calib. Date(s)**	: 04/11/21	04/11/21	
Sample No	: WG1489835-2	**Init. Calib. Times**	: 16:44	21:47	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.325	0.298	-	8.3	20	56	0
Chlorodibromomethane	0.512	0.563	-	-10	20	68	0
1,3-Dichloropropane	0.692	0.64	-	7.5	20	57	0
1,2-Dibromoethane	0.368	0.376	-	-2.2	20	64	-.01
2-Hexanone	10	9.637	-	3.6	20	68	0
Chlorobenzene	1.757	1.729	-	1.6	20	59	-.01
Ethylbenzene	3.145	3.1	-	1.4	20	56	0
1,1,1,2-Tetrachloroethane	0.626	0.714	-	-14.1	20	69	0
p/m Xylene	20	19.336	-	3.3	20	60	-.01
o Xylene	20	19.484	-	2.6	20	61	-.01
Styrene	20	19.768	-	1.2	20	62	-.01
1,4-Dichlorobenzene-d4	1	1	-	0	20	79	0
Bromoform	0.517	0.491	-	5	20	72	0
Isopropylbenzene	6.172	5.174	-	16.2	20	59	-.01
4-Bromofluorobenzene	0.997	0.773	-	22.5*	20	61	0
Bromobenzene	1.257	1.164	-	7.4	20	69	-.01
n-Propylbenzene	6.845	5.995	-	12.4	20	65	0
1,1,2,2-Tetrachloroethane	0.764	0.567	-	25.8*	20	55	0
2-Chlorotoluene	4.764	4.083	-	14.3	20	64	-.01
1,3,5-Trimethylbenzene	3.876	4.355	-	-12.4	20	85	0
1,2,3-Trichloropropane	0.635	0.505	-	20.5*	20	60	0
4-Chlorotoluene	4.01	3.572	-	10.9	20	67	0
tert-Butylbenzene	4.263	4.169	-	2.2	20	72	0
1,2,4-Trimethylbenzene	3.462	4.104	-	-18.5	20	90	0
sec-Butylbenzene	5.424	5.022	-	7.4	20	69	0
p-Isopropyltoluene	10	10.119	-	-1.2	20	84	0
1,3-Dichlorobenzene	2.441	2.51	-	-2.8	20	77	0
1,4-Dichlorobenzene	2.306	2.459	-	-6.6	20	81	0
n-Butylbenzene	10	10.151	-	-1.5	20	83	0
1,2-Dichlorobenzene	2.108	2.182	-	-3.5	20	77	0
1,2-Dibromo-3-chloropropan	0.11	0.094	-	14.5	20	64	0
Hexachlorobutadiene	0.787	0.756	-	3.9	20	76	0
1,2,4-Trichlorobenzene	0.939	1.154	-	-22.9*	20	99	0
Naphthalene	1.416	1.545	-	-9.1	20	82	0
1,2,3-Trichlorobenzene	0.783	0.989	-	-26.3*	20	93	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118447
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/24/21 02:27
Lab File ID	: J210423B02	Init. Calib. Date(s)	: 04/20/21 04/20/21
Sample No	: WG1490394-2	Init. Calib. Times	: 06:28 13:17
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	83	0
Dichlorodifluoromethane	1.718	1.728	-	-0.6	20	84	-.01
Chloromethane	2.239	2.508	-	-12	20	94	-.01
Vinyl chloride	2.099	2.191	-	-4.4	20	86	-.01
Bromomethane	10	12.746	-	-27.5*	20	98	0
Chloroethane	1.236	1.424	-	-15.2	20	96	-.01
Trichlorofluoromethane	2.886	3.186	-	-10.4	20	90	0
Ethyl ether	0.988	1.043	-	-5.6	20	93	-.01
1,1-Dichloroethene	1.62	1.78	-	-9.9	20	91	-.01
Carbon disulfide	4.976	5.472	-	-10	20	94	-.01
Freon-113	1.756	1.995	-	-13.6	20	92	-.01
Iodomethane	10	8.309	-	16.9	20	89	0
Acrolein	0.256	0.263	-	-2.7	20	92	-.02
Methylene chloride	1.895	2.084	-	-10	20	97	-.01
Acetone	10	11.492	-	-14.9	20	101	-.02
trans-1,2-Dichloroethene	1.744	1.9	-	-8.9	20	94	-.01
Methyl acetate	1.686	1.817	-	-7.8	20	97	-.01
Methyl tert-butyl ether	4.666	4.915	-	-5.3	20	93	0
tert-Butyl alcohol	0.162	0.167	-	-3.1	20	97	-.02
Diisopropyl ether	7.013	7.441	-	-6.1	20	95	-.01
1,1-Dichloroethane	3.687	4.061	-	-10.1	20	93	0
Halothane	1.455	1.614	-	-10.9	20	94	-.01
Acrylonitrile	0.743	0.838	-	-12.8	20	99	-.01
Ethyl tert-butyl ether	5.545	5.782	-	-4.3	20	94	0
Vinyl acetate	5.398	5.818	-	-7.8	20	98	0
cis-1,2-Dichloroethene	1.984	2.158	-	-8.8	20	92	-.01
2,2-Dichloropropane	2.857	3.188	-	-11.6	20	97	-.01
Bromochloromethane	0.938	1.054	-	-12.4	20	95	-.01
Cyclohexane	3.438	3.959	-	-15.2	20	94	0
Chloroform	3.496	3.796	-	-8.6	20	98	0
Ethyl acetate	2.26	2.463	-	-9	20	98	0
Carbon tetrachloride	2.608	3.013	-	-15.5	20	93	0
Tetrahydrofuran	0.702	0.716	-	-2	20	92	-.02
Dibromofluoromethane	0.274	0.264	-	3.6	20	82	0
1,1,1-Trichloroethane	3.004	3.39	-	-12.8	20	95	0
2-Butanone	1.019	1.029	-	-1	20	93	-.01
1,1-Dichloropropene	2.493	2.73	-	-9.5	20	91	0
Benzene	7.147	7.865	-	-10	20	93	0
tert-Amyl methyl ether	4.722	4.733	-	-0.2	20	96	0
1,2-Dichloroethane-d4	0.39	0.362	-	7.2	20	83	0
1,2-Dichloroethane	2.743	3.002	-	-9.4	20	96	0
Methyl cyclohexane	3.393	3.707	-	-9.3	20	94	0
Trichloroethene	1.946	2.141	-	-10	20	94	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2118447	
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H	
Instrument ID	: JACK	**Calibration Date**	: 04/24/21 02:27	
Lab File ID	: J210423B02	**Init. Calib. Date(s)**	: 04/20/21	04/20/21
Sample No	: WG1490394-2	**Init. Calib. Times**	: 06:28	13:17
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	1.192	1.275	-	-7	20	95	0
1,2-Dichloropropane	1.988	2.119	-	-6.6	20	96	0
2-Chloroethyl vinyl ether	10	9.377	-	6.2	20	91	0
Bromodichloromethane	2.635	2.798	-	-6.2	20	93	0
1,4-Dioxane	0.018	0.016*	-	11.1	20	83	-.01
cis-1,3-Dichloropropene	3.055	3.305	-	-8.2	20	93	0
Chlorobenzene-d5	1	1	-	0	20	82	0
Toluene-d8	1.158	1.201	-	-3.7	20	84	0
Toluene	5.622	5.941	-	-5.7	20	92	0
4-Methyl-2-pentanone	10	9.976	-	0.2	20	93	0
Tetrachloroethene	2.601	2.82	-	-8.4	20	92	0
trans-1,3-Dichloropropene	3.254	3.664	-	-12.6	20	95	0
Ethyl methacrylate	2.644	2.741	-	-3.7	20	93	0
1,1,2-Trichloroethane	1.582	1.733	-	-9.5	20	91	0
Chlorodibromomethane	2.288	2.368	-	-3.5	20	92	0
1,3-Dichloropropane	3.34	3.542	-	-6	20	91	0
1,2-Dibromoethane	1.93	2.083	-	-7.9	20	93	0
2-Hexanone	1.669	1.646	-	1.4	20	92	0
Chlorobenzene	6.368	6.997	-	-9.9	20	92	0
Ethylbenzene	10.067	11.932	-	-18.5	20	92	0
1,1,1,2-Tetrachloroethane	2.308	2.417	-	-4.7	20	91	0
p/m Xylene	4.037	4.846	-	-20	20	93	0
o Xylene	20	21.511	-	-7.6	20	91	0
Styrene	20	22.188	-	-10.9	20	91	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	80	0
Bromoform	2.777	2.816	-	-1.4	20	89	0
Isopropylbenzene	18.605	20.992	-	-12.8	20	92	0
4-Bromofluorobenzene	0.806	0.768	-	4.7	20	77	0
Bromobenzene	4.765	4.99	-	-4.7	20	90	0
n-Propylbenzene	22.882	26.367	-	-15.2	20	93	0
1,4-Dichlorobutane	6.578	7.231	-	-9.9	20	95	0
1,1,2,2-Tetrachloroethane	10	11.332	-	-13.3	20	93	0
4-Ethyltoluene	17.854	20.662	-	-15.7	20	93	0
2-Chlorotoluene	15.287	17.335	-	-13.4	20	93	0
1,3,5-Trimethylbenzene	15.64	17.275	-	-10.5	20	90	0
1,2,3-Trichloropropane	3.625	3.968	-	-9.5	20	92	0
trans-1,4-Dichloro-2-buten	1.546	1.618	-	-4.7	20	92	0
4-Chlorotoluene	13.902	15.426	-	-11	20	93	0
tert-Butylbenzene	13.881	15.479	-	-11.5	20	91	0
1,2,4-Trimethylbenzene	15.244	17.055	-	-11.9	20	92	0
sec-Butylbenzene	18.87	21.33	-	-13	20	91	0
p-Isopropyltoluene	10	10.581	-	-5.8	20	92	0
1,3-Dichlorobenzene	9.524	10.435	-	-9.6	20	93	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118447
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/24/21 02:27
Lab File ID	: J210423B02	Init. Calib. Date(s)	: 04/20/21 04/20/21
Sample No	: WG1490394-2	Init. Calib. Times	: 06:28 13:17
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	9.417	10.163	-	-7.9	20	93	0
p-Diethylbenzene	10.288	10.639	-	-3.4	20	89	0
n-Butylbenzene	15.665	17.855	-	-14	20	91	0
1,2-Dichlorobenzene	8.844	9.679	-	-9.4	20	95	0
1,2,4,5-Tetramethylbenzene	10	9.621	-	3.8	20	91	0
1,2-Dibromo-3-chloropropan	0.769	0.794	-	-3.3	20	90	0
1,3,5-Trichlorobenzene	6.153	6.773	-	-10.1	20	94	0
Hexachlorobutadiene	2.422	2.62	-	-8.2	20	91	0
1,2,4-Trichlorobenzene	5.391	5.667	-	-5.1	20	93	0
Naphthalene	10	9.879	-	1.2	20	92	0
1,2,3-Trichlorobenzene	5.031	5.403	-	-7.4	20	93	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L2118722
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	3252H
Report Date:	05/25/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2118722-01	MW-SD26-04132021	WATER	CONCORD, MA	04/13/21 09:15	04/13/21
L2118722-02	PT-09-04132021	WATER	CONCORD, MA	04/13/21 09:40	04/13/21
L2118722-03	BEW-4-04132021	WATER	CONCORD, MA	04/13/21 09:45	04/13/21
L2118722-04	HA20-CMT-4D1-04132021	WATER	CONCORD, MA	04/13/21 10:10	04/13/21
L2118722-05	TRIP BLANK1-04132021	WATER	CONCORD, MA	04/13/21 00:00	04/13/21
L2118722-06	MW-BM03-04132021	WATER	CONCORD, MA	04/13/21 11:05	04/13/21
L2118722-07	MW-BS10-04132021	WATER	CONCORD, MA	04/13/21 12:00	04/13/21
L2118722-08	MW-T10-04132021	WATER	CONCORD, MA	04/13/21 09:10	04/13/21
L2118722-09	EQ BLANK1-04132021	WATER	CONCORD, MA	04/13/21 13:00	04/13/21
L2118722-10	MW-BS13-04132021	WATER	CONCORD, MA	04/13/21 12:10	04/13/21
L2118722-11	MW-S30-04132021	WATER	CONCORD, MA	04/13/21 12:55	04/13/21
L2118722-12	FIELD BLANK1-04132021	WATER	CONCORD, MA	04/13/21 13:00	04/13/21
L2118722-13	HA20-CMT-5S-04132021	WATER	CONCORD, MA	04/13/21 13:05	04/13/21
L2118722-14	HA-09-04132021	WATER	CONCORD, MA	04/13/21 14:55	04/13/21
L2118722-15	MW-SO26-04132021	WATER	CONCORD, MA	04/13/21 14:55	04/13/21
L2118722-16	MW-SO26-04132021 DUP	WATER	CONCORD, MA	04/13/21 15:00	04/13/21
L2118722-17	HA20-CMT-5I-04132021	WATER	CONCORD, MA	04/13/21 15:10	04/13/21
L2118722-18	GZW-8-1-04132021	WATER	CONCORD, MA	04/13/21 11:50	04/13/21
L2118722-19	P1-A-04132021	WATER	CONCORD, MA	04/13/21 13:05	04/13/21

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Revision

May 25, 2021: This report includes the results of the Bromide analysis performed on L2118722-03, -07, -09, -10, and -18.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Volatile Organics

In reference to question H:

The WG1487778-3 LCS recovery, associated with L2118722-05, is above the individual acceptance criteria for acetone (140%), but within the overall method allowances. The results of the associated sample are reported; however, all positive detects are considered to have a potentially high bias for this compound.

The WG1490552-3 LCS recovery, associated with L2118722-01 through -04, -06, -07, -08, and -11, is above the individual acceptance criteria for 1,3,5-trimethylbenzene (140%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for this compound. The LCS/LCSD RPD is above the acceptance criteria for 1,3,5-trimethylbenzene (24%).

The WG1490642-3/-4 LCS/LCSD recoveries, associated with L2118722-09, -10, and -13 through -19, are above the individual acceptance criteria for 1,4-dioxane (152%/144%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for this compound.

The WG1490552-6/-7 MS/MSD RPD, performed on L2118722-11, is outside the acceptance criteria for tetrahydrofuran (21%).

L2118722-01 through -04, -06 through -11 and -13 through -19: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0098)

Case Narrative (continued)

Average Response Factor: 1,4-dioxane
L2118722-05: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0095)
Average Response Factor: 1,4-dioxane
L2118722-01 through -11 and -13 through -19: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

Semivolatile Organics
L2118722-01 through -04, -06 through -11, WG1487659-4 and WG1487659-5: The initial calibration utilized a quadratic fit for 2,4-dinitrotoluene, butyl benzyl phthalate, bis(2-ethylhexyl)phthalate, and di-n-octylphthalate.
L2118722-13 through -19, WG1487659-1, WG1487659-2, and WG1487659-3: The initial calibration utilized a quadratic fit for butyl benzyl phthalate, bis(2-ethylhexyl)phthalate, and di-n-octylphthalate.
In reference to question H:
The WG1487659-2/-3 LCS/LCSD recoveries, associated with L2118722-01 through -04, -06 through -11, and -13 through -19, are below the acceptance criteria for aniline (35%/32%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.
The WG1487659-4/-5 MS/MSD recoveries, performed on L2118722-11, are outside the acceptance criteria for 2,6-dinitrotoluene (36%/36%) and aniline (28%/35%).
The WG1487659-4/-5 MS/MSD RPDs, performed on L2118722-11, are outside the acceptance criteria for aniline (23%) and 2,4-dimethylphenol (32%).

Semivolatile Organics by SIM
L2118722-09, -10, -11, -13 through -19, WG1487660-1, WG1487660-2, WG1487660-3, WG1487660-4, and WG1487660-5: The initial calibration utilized a quadratic fit for pentachlorophenol.

Case Narrative (continued)

In reference to question H:
L2118722-03 and -09: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (112%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The surrogate recoveries for the WG1487660-4/-5 MS/MSD, performed on L2118722-11, are outside the acceptance criteria for nitrobenzene-d5 (26%/25%), 2-fluorobiphenyl (20%/19%), and 4-terphenyl-d14 (22%/22%). The associated MS spike compounds are within overall method allowances; therefore, no further action was taken.

Non-MCP Related Narratives
Perfluorinated Alkyl Acids by Isotope Dilution
L2118722-06, -09, -11, -12, -15, -16, and WG1486508-3/-4: The MeOH fraction of the extraction is reported for the following compounds: Perfluorooctanesulfonamide (FOSA), N-Methyl Perfluorooctane Sulfonamide (NMeFOSA), N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA), N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE), and N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).
L2118722-06, -09, and WG1486508-3/-4: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

Dissolved Organic Carbon
The samples were field filtered; a filter blank was not received.

Nitrogen, Nitrite
The WG1485921-4 MS recovery, performed on L2118722-14, is outside the acceptance criteria for nitrogen, nitrite (130%); however, the associated LCS recovery is within criteria. No further action was taken.

Case Narrative (continued)

Anions by Ion Chromatography

The WG1488176-3 MS recovery, performed on L2118722-07, is outside the acceptance criteria for sulfate (78%); however, the associated LCS recovery is within criteria. No further action was taken.

The WG1502651-3 MS recovery, performed on L2118722-07, is outside the acceptance criteria for bromide (76%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 05/25/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118722

Report Date: 05/25/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	Batch QC	WG1487778-3	Acetone	LCS	140	70-130	05	potential high bias
8260C	Batch QC	WG1490552-3	1,3,5-Trimethylbenzene	LCS	140	70-130	01-04,06-08,11	potential high bias
8260C	Batch QC	WG1490552-4	1,3,5-Trimethylbenzene	LCSD	24	20	01-04,06-08,11	non-directional bias
8260C	Batch QC (L2118722-11)	WG1490552-7	Tetrahydrofuran	MSD	21	20	01-04,06-08,11	non-directional bias
8260C	Batch QC	WG1490642-3	1,4-Dioxane	LCS	152	70-130	09-10,13-19	potential high bias
8260C	Batch QC	WG1490642-4	1,4-Dioxane	LCSD	144	70-130	09-10,13-19	potential high bias
MCP Semivolatile Organics - Westborough Lab								
8270D	Batch QC	WG1487659-2	Aniline	LCS	35	40-140	01-04,06-11,13-19	potential low bias
8270D	Batch QC	WG1487659-3	Aniline	LCSD	32	40-140	01-04,06-11,13-19	potential low bias
8270D	Batch QC (L2118722-11)	WG1487659-4	2,6-Dinitrotoluene	MS	36	40-140	01-04,06-11,13-19	potential low bias
8270D	Batch QC (L2118722-11)	WG1487659-4	Aniline	MS	28	40-140	01-04,06-11,13-19	potential low bias
8270D	Batch QC (L2118722-11)	WG1487659-5	2,6-Dinitrotoluene	MSD	36	40-140	01-04,06-11,13-19	potential low bias
8270D	Batch QC (L2118722-11)	WG1487659-5	Aniline	MSD	23	20	01-04,06-11,13-19	non-directional bias
8270D	Batch QC (L2118722-11)	WG1487659-5	Aniline	MSD	35	40-140	01-04,06-11,13-19	potential low bias
8270D	Batch QC (L2118722-11)	WG1487659-5	2,4-Dimethylphenol	MSD	32	20	01-04,06-11,13-19	non-directional bias
MCP Semivolatile Organics by SIM - Westborough Lab								
8270D-SIM	BEW-4-04132021	L2118722-03	2,4,6-Tribromophenol	Surrogate	112	15-110	-	potential high bias
8270D-SIM	EQ BLANK1-04132021	L2118722-09	2,4,6-Tribromophenol	Surrogate	112	15-110	-	potential high bias
8270D-SIM	Batch QC (L2118722-11)	WG1487660-4	Nitrobenzene-d5	Surrogate	26	30-130	-	potential low bias
8270D-SIM	Batch QC (L2118722-11)	WG1487660-4	2-Fluorobiphenyl	Surrogate	20	30-130	-	potential low bias
8270D-SIM	Batch QC (L2118722-11)	WG1487660-4	4-Terphenyl-d14	Surrogate	22	30-130	-	potential low bias
8270D-SIM	Batch QC (L2118722-11)	WG1487660-5	Nitrobenzene-d5	Surrogate	25	30-130	-	potential low bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118722

Report Date: 05/25/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D-SIM	Batch QC (L2118722-11)	WG1487660-5	2-Fluorobiphenyl	Surrogate	19	30-130	-	potential low bias
8270D-SIM	Batch QC (L2118722-11)	WG1487660-5	4-Terphenyl-d14	Surrogate	22	30-130	-	potential low bias
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2118722-07)	WG1488176-3	Sulfate	MS	78	90-110	03,07,09-10,18	potential low bias
300.0	Batch QC (L2118722-07)	WG1502651-3	Bromide	MS	76	90-110	07,09-10,18	potential low bias
General Chemistry - Westborough Lab								
353.2	Batch QC (L2118722-14)	WG1485921-4	Nitrogen, Nitrite	MS	130	80-120	13-19	potential high bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-01	Date Collected:	04/13/21 09:15
Client ID:	MW-SD26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/25/21 10:13
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.3		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-01	Date Collected:	04/13/21 09:15
Client ID:	MW-SD26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.40	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-01	Date Collected:	04/13/21 09:15
Client ID:	MW-SD26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	115		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-02	Date Collected:	04/13/21 09:40
Client ID:	PT-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/25/21 10:55
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-02
Client ID: PT-09-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 09:40
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.76	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-02 Date Collected: 04/13/21 09:40

Client ID: PT-09-04132021 Date Received: 04/13/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	120		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-03
Client ID: BEW-4-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 09:45
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/25/21 11:36
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	3.1		ug/l	1.0	0.21	1
Chloroform	0.46	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.67	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.45	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-03 Date Collected: 04/13/21 09:45
Client ID: BEW-4-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.64	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.34	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.34	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	11		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-03	Date Collected:	04/13/21 09:45
Client ID:	BEW-4-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	117		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-04
Client ID: HA20-CMT-4D1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 10:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/25/21 12:18
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.38	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	0.76	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-04 Date Collected: 04/13/21 10:10
Client ID: HA20-CMT-4D1-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	0.58	J	ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	0.58	J	ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-04	Date Collected:	04/13/21 10:10
Client ID:	HA20-CMT-4D1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	112		70-130

SAMPLE RESULTS

Lab ID:	L2118722-05	Date Collected:	04/13/21 00:00
Client ID:	TRIP BLANK1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 08:05
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-05 Date Collected: 04/13/21 00:00
Client ID: TRIP BLANK1-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-05
Client ID: TRIP BLANK1-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 00:00
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	128		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	127		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-06
Client ID: MW-BM03-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 11:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/25/21 13:00
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.33	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.35	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-06
Client ID: MW-BM03-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 11:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.2		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.68	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.68	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-06	Date Collected:	04/13/21 11:05
Client ID:	MW-BM03-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	113		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-07
Client ID: MW-BS10-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 12:00
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/25/21 13:42
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-07 Date Collected: 04/13/21 12:00
Client ID: MW-BS10-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	2.7		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.5		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.5		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-07	Date Collected:	04/13/21 12:00
Client ID:	MW-BS10-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	115		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-08	Date Collected:	04/13/21 09:10
Client ID:	MW-T10-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/25/21 14:24
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.80	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.36	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	0.32	J	ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-08	Date Collected:	04/13/21 09:10
Client ID:	MW-T10-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	9.1		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.4		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.7	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-08	Date Collected:	04/13/21 09:10
Client ID:	MW-T10-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	104		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-09
Client ID: EQ BLANK1-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 13:00
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 04:23
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-09 Date Collected: 04/13/21 13:00
Client ID: EQ BLANK1-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-09	Date Collected:	04/13/21 13:00
Client ID:	EQ BLANK1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	109		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-10
Client ID: MW-BS13-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 12:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 05:04
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	3.2		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.81	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.60	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-10 Date Collected: 04/13/21 12:10
Client ID: MW-BS13-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	2.3		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.81	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.81	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	2.8	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-10
Client ID: MW-BS13-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 12:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	111		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-11	Date Collected:	04/13/21 12:55
Client ID:	MW-S30-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Matrix:	Water
Analytical Method:	97,8260C
Analytical Date:	04/25/21 15:05
Analyst:	MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.86	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	1.1		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-11 Date Collected: 04/13/21 12:55

Client ID: MW-S30-04132021 Date Received: 04/13/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-11	Date Collected:	04/13/21 12:55
Client ID:	MW-S30-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	108		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-13	Date Collected:	04/13/21 13:05
Client ID:	HA20-CMT-5S-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 05:45
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	0.21	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-13	Date Collected:	04/13/21 13:05
Client ID:	HA20-CMT-5S-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.46	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.46	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-13	Date Collected:	04/13/21 13:05
Client ID:	HA20-CMT-5S-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	0.20	J	ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	111		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-14	Date Collected:	04/13/21 14:55
Client ID:	HA-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 06:27
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-14 Date Collected: 04/13/21 14:55
Client ID: HA-09-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-14	Date Collected:	04/13/21 14:55
Client ID:	HA-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	121		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-15
Client ID: MW-SO26-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 14:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 07:08
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.50	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	2.8		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	0.26	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-15
Client ID: MW-SO26-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 14:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.36	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-15	Date Collected:	04/13/21 14:55
Client ID:	MW-SO26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	112		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-16
Client ID: MW-SO26-04132021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:00
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 07:49
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.50	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	3.0		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	0.26	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-16	Date Collected:	04/13/21 15:00
Client ID:	MW-SO26-04132021 DUP	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.36	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-16	Date Collected:	04/13/21 15:00
Client ID:	MW-SO26-04132021 DUP	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	116		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-17
Client ID: HA20-CMT-5I-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 08:30
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.92	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-17	Date Collected:	04/13/21 15:10
Client ID:	HA20-CMT-5I-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-17 Date Collected: 04/13/21 15:10
Client ID: HA20-CMT-5I-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	114		70-130

SAMPLE RESULTS

Lab ID: L2118722-18
Client ID: GZW-8-1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 11:50
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 09:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.92	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	1.1		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-18
Client ID: GZW-8-1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 11:50
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-18
Client ID: GZW-8-1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 11:50
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	118		70-130

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-19
Client ID: P1-A-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 09:52
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.58	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	4.2		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-19	Date Collected:	04/13/21 13:05
Client ID:	P1-A-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.52	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-19	Date Collected:	04/13/21 13:05
Client ID:	P1-A-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	117		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05 Batch: WG1487778-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05 Batch: WG1487778-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05 Batch: WG1487778-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	119		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/25/21 07:28
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-04,06-08,11 Batch: WG1490552-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/25/21 07:28
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-04,06-08,11 Batch: WG1490552-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/25/21 07:28
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-04,06-08,11 Batch: WG1490552-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	102		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/26/21 03:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09-10,13-19 Batch: WG1490642-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/26/21 03:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09-10,13-19 Batch: WG1490642-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/26/21 03:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09-10,13-19 Batch: WG1490642-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	110		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG1487778-3 WG1487778-4								
Methylene chloride	120		120		70-130	0		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	110		100		70-130	10		20
1,1,2-Trichloroethane	120		110		70-130	9		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	110		100		70-130	10		20
Trichlorofluoromethane	110		110		70-130	0		20
1,2-Dichloroethane	120		120		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	120		110		70-130	9		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	92		94		70-130	2		20
1,1,2,2-Tetrachloroethane	110		110		70-130	0		20
Benzene	110		110		70-130	0		20
Toluene	110		100		70-130	10		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	130		120		70-130	8		20
Bromomethane	96		94		70-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG1487778-3 WG1487778-4								
Vinyl chloride	110		110		70-130	0		20
Chloroethane	120		110		70-130	9		20
1,1-Dichloroethene	110		110		70-130	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	100		110		70-130	10		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	110		110		70-130	0		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	110		110		70-130	0		20
Styrene	115		110		70-130	4		20
Dichlorodifluoromethane	110		110		70-130	0		20
Acetone	**140**	Q	130		70-130	7		20
Carbon disulfide	120		110		70-130	9		20
Methyl ethyl ketone	120		120		70-130	0		20
Methyl isobutyl ketone	100		100		70-130	0		20
2-Hexanone	110		120		70-130	9		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	130		130		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG1487778-3 WG1487778-4								
2,2-Dichloropropane	110		120		70-130	9		20
1,2-Dibromoethane	110		100		70-130	10		20
1,3-Dichloropropane	120		110		70-130	9		20
1,1,1,2-Tetrachloroethane	110		100		70-130	10		20
Bromobenzene	97		98		70-130	1		20
n-Butylbenzene	110		110		70-130	0		20
sec-Butylbenzene	100		110		70-130	10		20
tert-Butylbenzene	98		100		70-130	2		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	100		110		70-130	10		20
1,2-Dibromo-3-chloropropane	98		100		70-130	2		20
Hexachlorobutadiene	110		110		70-130	0		20
Isopropylbenzene	95		100		70-130	5		20
p-Isopropyltoluene	100		110		70-130	10		20
Naphthalene	96		96		70-130	0		20
n-Propylbenzene	100		110		70-130	10		20
1,2,3-Trichlorobenzene	100		99		70-130	1		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	100		110		70-130	10		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Diethyl ether	110		110		70-130	0		20
Diisopropyl Ether	120		120		70-130	0		20
Ethyl-Tert-Butyl-Ether	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG1487778-3 WG1487778-4								
Tertiary-Amyl Methyl Ether	95		100		70-130	5		20
1,4-Dioxane	112		96		70-130	15		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		106		70-130
Toluene-d8	102		100		70-130
4-Bromofluorobenzene	86		92		70-130
Dibromofluoromethane	102		99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04,06-08,11 Batch: WG1490552-3 WG1490552-4								
Methylene chloride	120		110		70-130	9		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	120		120		70-130	0		20
1,2-Dichloropropane	120		110		70-130	9		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	120		120		70-130	0		20
Chlorobenzene	120		120		70-130	0		20
Trichlorofluoromethane	120		120		70-130	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	120		120		70-130	0		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	120		110		70-130	9		20
1,1-Dichloropropene	120		120		70-130	0		20
Bromoform	110		100		70-130	10		20
1,1,2,2-Tetrachloroethane	110		100		70-130	10		20
Benzene	120		110		70-130	9		20
Toluene	110		110		70-130	0		20
Ethylbenzene	120		120		70-130	0		20
Chloromethane	110		100		70-130	10		20
Bromomethane	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Lab Number: L2118722
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04,06-08,11 Batch: WG1490552-3 WG1490552-4								
Vinyl chloride	110		110		70-130	0		20
Chloroethane	110		110		70-130	0		20
1,1-Dichloroethene	120		120		70-130	0		20
trans-1,2-Dichloroethene	120		120		70-130	0		20
Trichloroethene	120		120		70-130	0		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	120		110		70-130	9		20
1,4-Dichlorobenzene	120		110		70-130	9		20
Methyl tert butyl ether	120		110		70-130	9		20
p/m-Xylene	125		125		70-130	0		20
o-Xylene	125		125		70-130	0		20
cis-1,2-Dichloroethene	120		110		70-130	9		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	100		100		70-130	0		20
Styrene	115		120		70-130	4		20
Dichlorodifluoromethane	110		100		70-130	10		20
Acetone	110		100		70-130	10		20
Carbon disulfide	120		110		70-130	9		20
Methyl ethyl ketone	110		110		70-130	0		20
Methyl isobutyl ketone	100		110		70-130	10		20
2-Hexanone	100		110		70-130	10		20
Bromochloromethane	120		110		70-130	9		20
Tetrahydrofuran	120		110		70-130	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118722

Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04,06-08,11 Batch: WG1490552-3 WG1490552-4								
2,2-Dichloropropane	120		110		70-130	9		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	120		110		70-130	9		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	120		110		70-130	9		20
sec-Butylbenzene	120		110		70-130	9		20
tert-Butylbenzene	120		120		70-130	0		20
o-Chlorotoluene	120		110		70-130	9		20
p-Chlorotoluene	120		110		70-130	9		20
1,2-Dibromo-3-chloropropane	120		110		70-130	9		20
Hexachlorobutadiene	130		120		70-130	8		20
Isopropylbenzene	120		110		70-130	9		20
p-Isopropyltoluene	120		110		70-130	9		20
Naphthalene	110		100		70-130	10		20
n-Propylbenzene	120		110		70-130	9		20
1,2,3-Trichlorobenzene	120		110		70-130	9		20
1,2,4-Trichlorobenzene	120		110		70-130	9		20
1,3,5-Trimethylbenzene	**140**	Q	110		70-130	**24**	Q	20
1,2,4-Trimethylbenzene	120		110		70-130	9		20
Diethyl ether	120		110		70-130	9		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04,06-08,11 Batch: WG1490552-3 WG1490552-4								
Tertiary-Amyl Methyl Ether	110		110		70-130	0		20
1,4-Dioxane	128		124		70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	87		86		70-130
Toluene-d8	101		103		70-130
4-Bromofluorobenzene	104		91		70-130
Dibromofluoromethane	97		91		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Lab Number: L2118722
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09-10,13-19 Batch: WG1490642-3 WG1490642-4								
Methylene chloride	96		110		70-130	14		20
1,1-Dichloroethane	91		100		70-130	9		20
Chloroform	92		110		70-130	18		20
Carbon tetrachloride	91		100		70-130	9		20
1,2-Dichloropropane	96		100		70-130	4		20
Dibromochloromethane	110		100		70-130	10		20
1,1,2-Trichloroethane	110		100		70-130	10		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	99		100		70-130	1		20
Trichlorofluoromethane	94		100		70-130	6		20
1,2-Dichloroethane	96		100		70-130	4		20
1,1,1-Trichloroethane	92		100		70-130	8		20
Bromodichloromethane	94		100		70-130	6		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	99		110		70-130	11		20
1,1-Dichloropropene	98		100		70-130	2		20
Bromoform	100		110		70-130	10		20
1,1,2,2-Tetrachloroethane	100		110		70-130	10		20
Benzene	95		100		70-130	5		20
Toluene	96		100		70-130	4		20
Ethylbenzene	100		110		70-130	10		20
Chloromethane	87		93		70-130	7		20
Bromomethane	81		92		70-130	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09-10,13-19 Batch: WG1490642-3 WG1490642-4								
Vinyl chloride	85		95		70-130	11		20
Chloroethane	93		85		70-130	9		20
1,1-Dichloroethene	92		100		70-130	8		20
trans-1,2-Dichloroethene	95		110		70-130	15		20
Trichloroethene	98		110		70-130	12		20
1,2-Dichlorobenzene	95		110		70-130	15		20
1,3-Dichlorobenzene	95		110		70-130	15		20
1,4-Dichlorobenzene	94		110		70-130	16		20
Methyl tert butyl ether	110		120		70-130	9		20
p/m-Xylene	100		110		70-130	10		20
o-Xylene	100		110		70-130	10		20
cis-1,2-Dichloroethene	94		100		70-130	6		20
Dibromomethane	97		100		70-130	3		20
1,2,3-Trichloropropane	99		110		70-130	11		20
Styrene	100		105		70-130	5		20
Dichlorodifluoromethane	84		91		70-130	8		20
Acetone	110		120		70-130	9		20
Carbon disulfide	91		100		70-130	9		20
Methyl ethyl ketone	120		120		70-130	0		20
Methyl isobutyl ketone	110		110		70-130	0		20
2-Hexanone	110		120		70-130	9		20
Bromochloromethane	96		110		70-130	14		20
Tetrahydrofuran	120		130		70-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09-10,13-19 Batch: WG1490642-3 WG1490642-4								
2,2-Dichloropropane	94		100		70-130	6		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		110		70-130	10		20
Bromobenzene	93		110		70-130	17		20
n-Butylbenzene	99		110		70-130	11		20
sec-Butylbenzene	95		110		70-130	15		20
tert-Butylbenzene	95		110		70-130	15		20
o-Chlorotoluene	93		110		70-130	17		20
p-Chlorotoluene	93		110		70-130	17		20
1,2-Dibromo-3-chloropropane	110		120		70-130	9		20
Hexachlorobutadiene	110		120		70-130	9		20
Isopropylbenzene	91		110		70-130	19		20
p-Isopropyltoluene	92		100		70-130	8		20
Naphthalene	100		110		70-130	10		20
n-Propylbenzene	92		110		70-130	18		20
1,2,3-Trichlorobenzene	100		110		70-130	10		20
1,2,4-Trichlorobenzene	100		110		70-130	10		20
1,3,5-Trimethylbenzene	93		110		70-130	17		20
1,2,4-Trimethylbenzene	95		110		70-130	15		20
Diethyl ether	100		120		70-130	18		20
Diisopropyl Ether	100		110		70-130	10		20
Ethyl-Tert-Butyl-Ether	100		110		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09-10,13-19 Batch: WG1490642-3 WG1490642-4								
Tertiary-Amyl Methyl Ether	100		110		70-130	10		20
1,4-Dioxane	**152**	Q	**144**	Q	70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	90		88		70-130
Toluene-d8	103		102		70-130
4-Bromofluorobenzene	96		105		70-130
Dibromofluoromethane	94		99		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04,06-08,11 QC Batch ID: WG1490552-6 WG1490552-7 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
Methylene chloride	ND	10	10	100		10	100		70-130	0		20
1,1-Dichloroethane	ND	10	10	100		10	100		70-130	0		20
Chloroform	0.86J	10	11	110		11	110		70-130	0		20
Carbon tetrachloride	ND	10	11	110		10	100		70-130	10		20
1,2-Dichloropropane	ND	10	10	100		10	100		70-130	0		20
Dibromochloromethane	ND	10	10	100		10	100		70-130	0		20
1,1,2-Trichloroethane	ND	10	10	100		10	100		70-130	0		20
Tetrachloroethene	1.1	10	12	109		12	109		70-130	0		20
Chlorobenzene	ND	10	10	100		10	100		70-130	0		20
Trichlorofluoromethane	ND	10	11	110		11	110		70-130	0		20
1,2-Dichloroethane	ND	10	10	100		9.9	99		70-130	1		20
1,1,1-Trichloroethane	ND	10	11	110		10	100		70-130	10		20
Bromodichloromethane	ND	10	10	100		10	100		70-130	0		20
trans-1,3-Dichloropropene	ND	10	9.5	95		9.4	94		70-130	1		20
cis-1,3-Dichloropropene	ND	10	9.7	97		9.5	95		70-130	2		20
1,1-Dichloropropene	ND	10	11	110		11	110		70-130	0		20
Bromoform	ND	10	9.1	91		9.4	94		70-130	3		20
1,1,2,2-Tetrachloroethane	ND	10	9.7	97		9.8	98		70-130	1		20
Benzene	ND	10	10	100		10	100		70-130	0		20
Toluene	ND	10	10	100		10	100		70-130	0		20
Ethylbenzene	ND	10	11	110		11	110		70-130	0		20
Chloromethane	ND	10	9.8	98		9.5	95		70-130	3		20
Bromomethane	ND	10	9.1	91		9.6	96		70-130	5		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04,06-08,11 QC Batch ID: WG1490552-6 WG1490552-7 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
Vinyl chloride	ND	10	10	100		9.9	99		70-130	1		20
Chloroethane	ND	10	9.3	93		10	100		70-130	7		20
1,1-Dichloroethene	ND	10	11	110		10	100		70-130	10		20
trans-1,2-Dichloroethene	ND	10	11	110		10	100		70-130	10		20
Trichloroethene	ND	10	11	110		10	100		70-130	10		20
1,2-Dichlorobenzene	ND	10	9.6	96		9.8	98		70-130	2		20
1,3-Dichlorobenzene	ND	10	9.9	99		9.8	98		70-130	1		20
1,4-Dichlorobenzene	ND	10	9.9	99		9.8	98		70-130	1		20
Methyl tert butyl ether	ND	10	10	100		10	100		70-130	0		20
p/m-Xylene	ND	20	22	110		22	110		70-130	0		20
o-Xylene	ND	20	22	110		22	110		70-130	0		20
cis-1,2-Dichloroethene	ND	10	11	110		10	100		70-130	10		20
Dibromomethane	ND	10	10	100		9.9	99		70-130	1		20
1,2,3-Trichloropropane	ND	10	9.5	95		9.2	92		70-130	3		20
Styrene	ND	20	21	105		21	105		70-130	0		20
Dichlorodifluoromethane	ND	10	9.9	99		9.5	95		70-130	4		20
Acetone	ND	10	11	110		9.9	99		70-130	11		20
Carbon disulfide	ND	10	11	110		10	100		70-130	10		20
Methyl ethyl ketone	ND	10	11	110		11	110		70-130	0		20
Methyl isobutyl ketone	ND	10	10	100		10	100		70-130	0		20
2-Hexanone	ND	10	10	100		11	110		70-130	10		20
Bromochloromethane	ND	10	11	110		9.9	99		70-130	11		20
Tetrahydrofuran	ND	10	12	120		9.7	97		70-130	**21**	Q	20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04,06-08,11 QC Batch ID: WG1490552-6 WG1490552-7 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
2,2-Dichloropropane	ND	10	8.7	87		8.4	84		70-130	4		20
1,2-Dibromoethane	ND	10	10	100		10	100		70-130	0		20
1,3-Dichloropropane	ND	10	10	100		10	100		70-130	0		20
1,1,1,2-Tetrachloroethane	ND	10	10	100		10	100		70-130	0		20
Bromobenzene	ND	10	9.6	96		9.5	95		70-130	1		20
n-Butylbenzene	ND	10	10	100		10	100		70-130	0		20
sec-Butylbenzene	ND	10	10	100		10	100		70-130	0		20
tert-Butylbenzene	ND	10	10	100		10	100		70-130	0		20
o-Chlorotoluene	ND	10	9.9	99		10	100		70-130	1		20
p-Chlorotoluene	ND	10	9.8	98		9.8	98		70-130	0		20
1,2-Dibromo-3-chloropropane	ND	10	11	110		11	110		70-130	0		20
Hexachlorobutadiene	ND	10	9.7	97		10	100		70-130	3		20
Isopropylbenzene	ND	10	9.8	98		9.8	98		70-130	0		20
p-Isopropyltoluene	ND	10	9.5	95		9.8	98		70-130	3		20
Naphthalene	ND	10	9.1	91		9.3	93		70-130	2		20
n-Propylbenzene	ND	10	9.9	99		9.9	99		70-130	0		20
1,2,3-Trichlorobenzene	ND	10	9.7	97		9.6	96		70-130	1		20
1,2,4-Trichlorobenzene	ND	10	9.6	96		10	100		70-130	4		20
1,3,5-Trimethylbenzene	ND	10	9.9	99		10	100		70-130	1		20
1,2,4-Trimethylbenzene	ND	10	9.7	97		10	100		70-130	3		20
Diethyl ether	ND	10	11	110		10	100		70-130	10		20
Diisopropyl Ether	ND	10	9.8	98		9.8	98		70-130	0		20
Ethyl-Tert-Butyl-Ether	ND	10	9.7	97		9.7	97		70-130	0		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04,06-08,11 QC Batch ID: WG1490552-6 WG1490552-7 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
Tertiary-Amyl Methyl Ether	ND	10	9.8	98		9.7	97		70-130	1		20
1,4-Dioxane	ND	500	590	118		590	118		70-130	0		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		90		70-130
4-Bromofluorobenzene	98		94		70-130
Dibromofluoromethane	104		97		70-130
Toluene-d8	104		102		70-130

SEMIVOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-01
Client ID: MW-SD26-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 09:15
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 07:17
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-01 Date Collected: 04/13/21 09:15
Client ID: MW-SD26-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	65		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-01
Client ID: MW-SD26-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 09:15
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 21:29
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-01	Date Collected:	04/13/21 09:15
Client ID:	MW-SD26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	61		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	85		15-110
4-Terphenyl-d14	80		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-01	Date Collected:	04/13/21 09:15
Client ID:	MW-SD26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 14:05		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.41		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-02	Date Collected:	04/13/21 09:40
Client ID:	PT-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/18/21 09:51
Analytical Date:	04/20/21 07:41		
Analyst:	EK		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.6	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-02	Date Collected:	04/13/21 09:40
Client ID:	PT-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	72		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	60		15-110
4-Terphenyl-d14	72		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-02	Date Collected:	04/13/21 09:40
Client ID:	PT-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/18/21 09:52
Analytical Date:	04/22/21 21:49		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-02	Date Collected:	04/13/21 09:40
Client ID:	PT-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	55		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	79		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-02	Date Collected:	04/13/21 09:40
Client ID:	PT-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 14:30		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-03
Client ID: BEW-4-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 09:45
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 08:04
Analyst: EK
Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-03 Date Collected: 04/13/21 09:45

Client ID: BEW-4-04132021 Date Received: 04/13/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-03
Client ID: BEW-4-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 09:45
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 22:08
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.03	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.06	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.05	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-03	Date Collected:	04/13/21 09:45
Client ID:	BEW-4-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		15-110
Phenol-d6	46		15-110
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	**112**	Q	15-110
4-Terphenyl-d14	75		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-03	Date Collected:	04/13/21 09:45
Client ID:	BEW-4-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 14:54		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	4.78		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS　　**Lab Number:** L2118722

Project Number: 3252H　　**Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-04　　Date Collected: 04/13/21 10:10
Client ID: HA20-CMT-4D1-04132021　　Date Received: 04/13/21
Sample Location: CONCORD, MA　　Field Prep: Not Specified

Sample Depth:
Matrix: Water　　Extraction Method: EPA 3510C
Analytical Method: 97,8270D　　Extraction Date: 04/18/21 09:51
Analytical Date: 04/20/21 08:28
Analyst: EK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-04	Date Collected:	04/13/21 10:10
Client ID:	HA20-CMT-4D1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	65		15-110
4-Terphenyl-d14	75		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-04
Client ID: HA20-CMT-4D1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 10:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 22:28
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.03	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.11		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.05	J	ug/l	0.10	0.01	1
Phenanthrene	0.11		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.06	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.12		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-04	Date Collected:	04/13/21 10:10
Client ID:	HA20-CMT-4D1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	94		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-04
Client ID: HA20-CMT-4D1-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 10:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 15:18
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/20/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.309		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-06	Date Collected:	04/13/21 11:05
Client ID:	MW-BM03-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 06:14		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.78	0.518	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.8	6.57	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.8	5.93	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.6	19.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.6	20.1	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	69		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	65		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	61		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	56		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	52		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-06	Date Collected:	04/13/21 11:05
Client ID:	MW-BM03-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 12:29		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.525	J	ng/l	1.78	0.364	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.78	0.354	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.78	0.212	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.78	0.404	1
Perfluorohexanoic Acid (PFHxA)	0.443	J	ng/l	1.78	0.293	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.78	0.219	1
Perfluoroheptanoic Acid (PFHpA)	0.382	J	ng/l	1.78	0.201	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.78	0.336	1
Perfluorooctanoic Acid (PFOA)	2.95		ng/l	1.78	0.211	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.78	1.19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.78	0.614	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.78	0.278	1
Perfluorooctanesulfonic Acid (PFOS)	1.36	J	ng/l	1.78	0.450	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.78	0.271	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.78	1.08	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.78	1.00	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.78	0.578	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.78	0.232	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.78	0.875	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.78	0.718	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.78	0.332	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.78	0.292	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.78	0.221	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.6	20.3	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.78	0.300	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.57	1.11	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.57	1.02	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-06	Date Collected:	04/13/21 11:05
Client ID:	MW-BM03-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.78	0.550	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.46	1.80	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.78	0.247	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.78	0.262	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	88		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	79		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	102		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	75		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	80		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	97		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	85		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**161**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	83		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	142		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	70		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	79		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	79		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	84		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	86		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	86		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	101		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-06
Client ID: MW-BM03-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 11:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 08:52
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-06	Date Collected:	04/13/21 11:05
Client ID:	MW-BM03-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	58		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-06
Client ID: MW-BM03-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 11:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 22:48
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.03	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.03	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-06	Date Collected:	04/13/21 11:05
Client ID:	MW-BM03-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		15-110
Phenol-d6	45		15-110
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	77		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-06	Date Collected:	04/13/21 11:05
Client ID:	MW-BM03-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 15:42		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	4.34		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-07
Client ID: MW-BS10-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 12:00
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 09:15
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118722

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-07 | Date Collected: 04/13/21 12:00

Client ID: MW-BS10-04132021 | Date Received: 04/13/21

Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		15-110
Phenol-d6	61		15-110
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	70		15-110
4-Terphenyl-d14	72		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-07
Client ID: MW-BS10-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 12:00
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 23:07
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.02	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-07	Date Collected:	04/13/21 12:00
Client ID:	MW-BS10-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	77		15-110
4-Terphenyl-d14	78		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-07	Date Collected:	04/13/21 12:00
Client ID:	MW-BS10-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 16:07		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.375		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-08
Client ID: MW-T10-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 09:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 09:39
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.6	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118722

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-08	Date Collected:	04/13/21 09:10
Client ID:	MW-T10-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	62		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-08
Client ID: MW-T10-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 09:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 23:27
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-08
Client ID: MW-T10-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 09:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	41		15-110
Nitrobenzene-d5	55		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	83		15-110
4-Terphenyl-d14	72		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-08	Date Collected:	04/13/21 09:10
Client ID:	MW-T10-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/29/21 07:33		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.09		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	39		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-09
Client ID: EQ BLANK1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:00
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 06:36
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.81	0.525	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.1	6.67	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.1	6.01	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	45.3	20.1	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	45.3	20.4	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	77		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	60		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	58		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	59		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	56		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-09	Date Collected:	04/13/21 13:00
Client ID:	EQ BLANK1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 13:19		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.81	0.370	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.81	0.359	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.81	0.216	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.81	0.409	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.81	0.297	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.81	0.222	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.81	0.204	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.81	0.340	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.81	0.214	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.81	1.21	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.81	0.623	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.81	0.283	1
Perfluorooctanesulfonic Acid (PFOS)	1.07	JF	ng/l	1.81	0.456	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.81	0.275	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.81	1.10	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.81	1.01	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.81	0.587	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.81	0.236	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.81	0.888	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.81	0.728	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.81	0.337	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.81	0.296	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.81	0.225	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	45.3	20.6	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.81	0.304	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.62	1.12	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.62	1.04	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-09	Date Collected:	04/13/21 13:00
Client ID:	EQ BLANK1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.81	0.558	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.53	1.83	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.81	0.251	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.81	0.266	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	89		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	76		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	80		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	88		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	74		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	80		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	96		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**170**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	90		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	87		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	140		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	71		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	103		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	77		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	108		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	99		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	95		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	126		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-09
Client ID: EQ BLANK1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:00
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 10:02
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-09 Date Collected: 04/13/21 13:00
Client ID: EQ BLANK1-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	79		15-110
4-Terphenyl-d14	79		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-09
Client ID: EQ BLANK1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:00
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 15:46
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.05	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.02	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.08	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.07	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-09 Date Collected: 04/13/21 13:00

Client ID: EQ BLANK1-04132021 Date Received: 04/13/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	105		30-130
2-Fluorobiphenyl	81		30-130
2,4,6-Tribromophenol	**112**	Q	15-110
4-Terphenyl-d14	102		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-09
Client ID: EQ BLANK1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:00
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 10:53
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-10
Client ID: MW-BS13-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 12:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 10:26
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	4.0		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-10	Date Collected:	04/13/21 12:10
Client ID:	MW-BS13-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	75		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-10	Date Collected:	04/13/21 12:10
Client ID:	MW-BS13-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/18/21 09:52
Analytical Date:	04/23/21 16:05		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.03	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-10 Date Collected: 04/13/21 12:10

Client ID: MW-BS13-04132021 Date Received: 04/13/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-110
Phenol-d6	45		15-110
Nitrobenzene-d5	98		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	95		15-110
4-Terphenyl-d14	91		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-10	Date Collected:	04/13/21 12:10
Client ID:	MW-BS13-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 17:22		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	44.4		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	41		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-11
Client ID: MW-S30-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 12:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 06:43
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.74	0.505	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.4	6.41	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.4	5.78	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	43.6	19.3	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	43.6	19.6	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	70		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	61		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	59		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	57		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	52		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-11	Date Collected:	04/13/21 12:55
Client ID:	MW-S30-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 13:35		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	2.14		ng/l	1.74	0.355	1
Perfluoropentanoic Acid (PFPeA)	4.01		ng/l	1.74	0.345	1
Perfluorobutanesulfonic Acid (PFBS)	1.49	J	ng/l	1.74	0.207	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.74	0.394	1
Perfluorohexanoic Acid (PFHxA)	3.31		ng/l	1.74	0.286	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.74	0.214	1
Perfluoroheptanoic Acid (PFHpA)	1.79		ng/l	1.74	0.196	1
Perfluorohexanesulfonic Acid (PFHxS)	0.990	J	ng/l	1.74	0.328	1
Perfluorooctanoic Acid (PFOA)	4.72		ng/l	1.74	0.206	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.74	1.16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.74	0.599	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.74	0.272	1
Perfluorooctanesulfonic Acid (PFOS)	2.62	F	ng/l	1.74	0.439	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.74	0.265	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.74	1.06	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.74	0.976	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.74	0.564	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.74	0.226	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.74	0.854	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.74	0.700	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.74	0.324	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.74	0.285	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.74	0.216	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	43.6	19.8	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.74	0.293	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.48	1.08	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.48	1.00	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-11	Date Collected:	04/13/21 12:55
Client ID:	MW-S30-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.74	0.536	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.36	1.76	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.74	0.241	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.74	0.255	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	70		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	72		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	85		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	84		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	58		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	60		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	100		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	72		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	111		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	74		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	97		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	76		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	126		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	47		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	52		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	91		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	85		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	65		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	98		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-11
Client ID: MW-S30-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 12:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 11:37
Analyst: EK
Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.2	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-11	Date Collected:	04/13/21 12:55
Client ID:	MW-S30-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	73		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-11
Client ID: MW-S30-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 12:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 09:26
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-11	Date Collected:	04/13/21 12:55
Client ID:	MW-S30-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	86		15-110
4-Terphenyl-d14	90		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-11
Client ID: MW-S30-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 12:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 17:48
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.395		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-12	Date Collected:	04/13/21 13:00
Client ID:	FIELD BLANK1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 06:50		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.85	0.537	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.5	6.81	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.5	6.15	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	46.3	20.6	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	46.3	20.8	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	53		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	51		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	56		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	53		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-12	Date Collected:	04/13/21 13:00
Client ID:	FIELD BLANK1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 13:52		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.85	0.378	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.85	0.367	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.85	0.220	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.85	0.418	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.85	0.304	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.85	0.227	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.85	0.208	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.85	0.348	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.85	0.218	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.85	1.23	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.85	0.637	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.85	0.289	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.85	0.467	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.85	0.281	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.85	1.12	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.85	1.04	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.85	0.600	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.85	0.241	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.85	0.907	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.85	0.744	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.85	0.344	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.85	0.303	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.85	0.230	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	46.3	21.0	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.85	0.311	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.70	1.15	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.70	1.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-12	Date Collected:	04/13/21 13:00
Client ID:	FIELD BLANK1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.85	0.570	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.63	1.87	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.85	0.256	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.85	0.271	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	92		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	80		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	74		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	76		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	99		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	89		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	137		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	86		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	90		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	153		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	84		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	86		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	85		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	97		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	91		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	98		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	107		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-13	Date Collected:	04/13/21 13:05
Client ID:	HA20-CMT-5S-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/18/21 10:34
Analytical Date:	04/20/21 14:57		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.1	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118722

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-13
Client ID: HA20-CMT-5S-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	91		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-13
Client ID: HA20-CMT-5S-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 16:25
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 10:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.03	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.03	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.05	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.04	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.02	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-13	Date Collected:	04/13/21 13:05
Client ID:	HA20-CMT-5S-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	98		15-110
4-Terphenyl-d14	85		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-13
Client ID: HA20-CMT-5S-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 19:05
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.875		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-14
Client ID: HA-09-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 14:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 15:20
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 10:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-14	Date Collected:	04/13/21 14:55
Client ID:	HA-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	72		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-14	Date Collected:	04/13/21 14:55
Client ID:	HA-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/18/21 10:34
Analytical Date:	04/23/21 16:45		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.05	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.37		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.02	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	0.03	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.03	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.10		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.08	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.12		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-14	Date Collected:	04/13/21 14:55
Client ID:	HA-09-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	82		15-110
4-Terphenyl-d14	84		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-14
Client ID: HA-09-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 14:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 19:29
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-15	Date Collected:	04/13/21 14:55
Client ID:	MW-SO26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 06:57		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.77	0.514	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.7	6.52	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.7	5.89	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.3	19.7	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.3	20.0	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	74		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	65		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	63		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	58		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	53		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-15	Date Collected:	04/13/21 14:55
Client ID:	MW-SO26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 14:08		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	1.72	J	ng/l	1.77	0.362	1
Perfluoropentanoic Acid (PFPeA)	2.07		ng/l	1.77	0.351	1
Perfluorobutanesulfonic Acid (PFBS)	1.19	J	ng/l	1.77	0.211	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.77	0.401	1
Perfluorohexanoic Acid (PFHxA)	2.68		ng/l	1.77	0.291	1
Perfluoropentanesulfonic Acid (PFPeS)	0.223	J	ng/l	1.77	0.217	1
Perfluoroheptanoic Acid (PFHpA)	1.15	J	ng/l	1.77	0.200	1
Perfluorohexanesulfonic Acid (PFHxS)	4.16	F	ng/l	1.77	0.333	1
Perfluorooctanoic Acid (PFOA)	3.79		ng/l	1.77	0.209	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.77	1.18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.77	0.610	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.77	0.276	1
Perfluorooctanesulfonic Acid (PFOS)	6.41	F	ng/l	1.77	0.447	1
Perfluorodecanoic Acid (PFDA)	0.323	JF	ng/l	1.77	0.270	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.77	1.07	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.77	0.993	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.77	0.574	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.77	0.230	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.77	0.869	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.77	0.713	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.77	0.330	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.77	0.290	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.77	0.220	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.3	20.1	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.77	0.298	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.55	1.10	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.55	1.02	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-15	Date Collected:	04/13/21 14:55
Client ID:	MW-SO26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.77	0.546	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.43	1.79	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.77	0.245	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.77	0.260	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	69		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	62		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	79		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	83		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	58		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	62		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	100		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	71		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	95		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	71		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	95		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	77		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	112		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	49		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	75		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	56		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	61		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	86		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	70		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	101		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-15	Date Collected:	04/13/21 14:55
Client ID:	MW-SO26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/18/21 10:34
Analytical Date:	04/20/21 16:18		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.6	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-15	Date Collected:	04/13/21 14:55
Client ID:	MW-SO26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	51		15-110
4-Terphenyl-d14	70		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-15
Client ID: MW-SO26-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 14:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 17:05
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 10:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	0.04	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.05	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.07	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	0.07	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-15	Date Collected:	04/13/21 14:55
Client ID:	MW-SO26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	92		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	65		15-110
4-Terphenyl-d14	86		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-15	Date Collected:	04/13/21 14:55
Client ID:	MW-SO26-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 19:54		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.132	J	ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-16	Date Collected:	04/13/21 15:00
Client ID:	MW-SO26-04132021 DUP	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 07:05		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.74	0.505	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.4	6.41	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.4	5.78	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	43.6	19.3	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	43.6	19.6	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	69		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	60		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	57		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		10-187

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-16
Client ID: MW-SO26-04132021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:00
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 14:25
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	1.80		ng/l	1.74	0.355	1
Perfluoropentanoic Acid (PFPeA)	2.12		ng/l	1.74	0.345	1
Perfluorobutanesulfonic Acid (PFBS)	1.17	J	ng/l	1.74	0.207	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.74	0.394	1
Perfluorohexanoic Acid (PFHxA)	2.63		ng/l	1.74	0.286	1
Perfluoropentanesulfonic Acid (PFPeS)	0.247	JF	ng/l	1.74	0.214	1
Perfluoroheptanoic Acid (PFHpA)	1.18	J	ng/l	1.74	0.196	1
Perfluorohexanesulfonic Acid (PFHxS)	4.19	F	ng/l	1.74	0.328	1
Perfluorooctanoic Acid (PFOA)	4.01		ng/l	1.74	0.206	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.74	1.16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.74	0.599	1
Perfluorononanoic Acid (PFNA)	0.307	J	ng/l	1.74	0.272	1
Perfluorooctanesulfonic Acid (PFOS)	6.36		ng/l	1.74	0.439	1
Perfluorodecanoic Acid (PFDA)	0.272	J	ng/l	1.74	0.265	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.74	1.06	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.74	0.976	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.74	0.564	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.74	0.226	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.74	0.854	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.74	0.700	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.74	0.324	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.74	0.285	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.74	0.216	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	43.6	19.8	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.74	0.293	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.48	1.08	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.48	1.00	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-16	Date Collected:	04/13/21 15:00
Client ID:	MW-SO26-04132021 DUP	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.74	0.536	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.36	1.76	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.74	0.241	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.74	0.255	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	74		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	66		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	84		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	90		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	64		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	66		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	103		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	73		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	87		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	73		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	100		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	79		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	100		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	47		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	55		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	70		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	89		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	82		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	107		10-206

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-16
Client ID: MW-SO26-04132021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:00
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 16:41
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 10:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-16	Date Collected:	04/13/21 15:00
Client ID:	MW-SO26-04132021 DUP	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	63		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	70		15-110
4-Terphenyl-d14	77		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-16
Client ID: MW-SO26-04132021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:00
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 17:24
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 10:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-16 Date Collected: 04/13/21 15:00

Client ID: MW-SO26-04132021 DUP Date Received: 04/13/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	104		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	70		15-110
4-Terphenyl-d14	96		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-16	Date Collected:	04/13/21 15:00
Client ID:	MW-SO26-04132021 DUP	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 20:20		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.166		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-17
Client ID: HA20-CMT-5I-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 17:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 10:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-17 Date Collected: 04/13/21 15:10

Client ID: HA20-CMT-5I-04132021 Date Received: 04/13/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	61		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	84		15-110
4-Terphenyl-d14	82		30-130

Project Name: NUCLEAR METALS

Lab Number: L2118722

Project Number: 3252H

Report Date: 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-17	Date Collected:	04/13/21 15:10
Client ID:	HA20-CMT-5I-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/18/21 10:34
Analytical Date:	04/23/21 17:44		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.03	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.04	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.05	J	ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.07	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.08	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.07	J	ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-17	Date Collected:	04/13/21 15:10
Client ID:	HA20-CMT-5I-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	45		15-110
Nitrobenzene-d5	95		30-130
2-Fluorobiphenyl	71		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	88		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-17
Client ID: HA20-CMT-5I-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 21:49
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	40		15-110

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2118722

Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-18
Client ID: GZW-8-1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 11:50
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 17:26
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 10:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-18	Date Collected:	04/13/21 11:50
Client ID:	GZW-8-1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	63		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	78		15-110
4-Terphenyl-d14	80		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-18	Date Collected:	04/13/21 11:50
Client ID:	GZW-8-1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/18/21 10:34
Analytical Date:	04/23/21 18:04		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.04	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-18	Date Collected:	04/13/21 11:50
Client ID:	GZW-8-1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	98		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	88		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-18	Date Collected:	04/13/21 11:50
Client ID:	GZW-8-1-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 22:13		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.309		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-19	Date Collected:	04/13/21 13:05
Client ID:	P1-A-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/18/21 10:34
Analytical Date:	04/20/21 17:49		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-19	Date Collected:	04/13/21 13:05
Client ID:	P1-A-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	54		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	71		30-130

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-19
Client ID: P1-A-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 13:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 18:24
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/18/21 10:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.19		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.13		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.11		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.10		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.06	J	ug/l	0.10	0.01	1
Chrysene	0.13		ug/l	0.10	0.01	1
Acenaphthylene	0.04	J	ug/l	0.10	0.01	1
Anthracene	0.05	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.06	J	ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.14		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.06	J	ug/l	0.10	0.01	1
Pyrene	0.28		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-19	Date Collected:	04/13/21 13:05
Client ID:	P1-A-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	85		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	50		15-110
4-Terphenyl-d14	83		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-19	Date Collected:	04/13/21 13:05
Client ID:	P1-A-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 22:38		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.268		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	40		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 05:38
Analyst: HT
Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06,09,11-12,15-16 Batch: WG1486508-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	50		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	46		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		10-187

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06,09,11-12,15-16 Batch: WG1486508-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06,09,11-12,15-16 Batch: WG1486508-1					
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT
Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06,09,11-12,15-16 Batch: WG1486508-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	84		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	88		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	60		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	78		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	97		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	91		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	114		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	84		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	121		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	69		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	89		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	46		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	103		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	91		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	90		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	113		10-206

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 18:40
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04,06-11,13-19 Batch: WG1487659-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 18:40
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:51

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04,06-11,13-19 Batch: WG1487659-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/19/21 18:40	Extraction Date:	04/18/21 09:51
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04,06-11,13-19 Batch: WG1487659-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	89		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 01:44
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-04,06-11,13-19 Batch: WG1487660-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 01:44
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:52

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-04,06-11,13-19 Batch: WG1487660-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	106		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	75		15-110
4-Terphenyl-d14	92		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2118722

Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 12:47
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-04,06-11,13-19 Batch: WG1488350-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,09,11-12,15-16 Batch: WG1486508-2								
Perfluorooctanesulfonamide (FOSA)	86		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	109		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	119		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	99		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	103		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	46				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	42				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	49				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	48				10-187

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,09,11-12,15-16 Batch: WG1486508-2								
Perfluorobutanoic Acid (PFBA)	106		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	108		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	115		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	118		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	110		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	93		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	107		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	100		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	109		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	110		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	106		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	116		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	108		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	113		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	109		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	104		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	142		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	114		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	106		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	107		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	102		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	99		-		67-153	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,09,11-12,15-16 Batch: WG1486508-2								
Perfluorotridecanoic Acid (PFTrDA)	121		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	113		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	120		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	106		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	97		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	78		-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	128		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	102		-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	86		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	77		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,09,11-12,15-16 Batch: WG1486508-2

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	88				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	77				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	67				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	72				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	77				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	93				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	85				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	125				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	79				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	83				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	130				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	63				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	93				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	47				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	96				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	96				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	81				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	117				10-206

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04,06-11,13-19 Batch: WG1487659-2 WG1487659-3								
Acenaphthene	68		65		40-140	5		20
1,2,4-Trichlorobenzene	66		63		40-140	5		20
Hexachlorobenzene	69		66		40-140	4		20
Bis(2-chloroethyl)ether	66		63		40-140	5		20
2-Chloronaphthalene	68		65		40-140	5		20
1,2-Dichlorobenzene	63		60		40-140	5		20
1,3-Dichlorobenzene	62		57		40-140	8		20
1,4-Dichlorobenzene	63		58		40-140	8		20
3,3'-Dichlorobenzidine	56		56		40-140	0		20
2,4-Dinitrotoluene	74		71		40-140	4		20
2,6-Dinitrotoluene	78		72		40-140	8		20
Azobenzene	63		60		40-140	5		20
Fluoranthene	63		63		40-140	0		20
4-Bromophenyl phenyl ether	71		68		40-140	4		20
Bis(2-chloroisopropyl)ether	72		69		40-140	4		20
Bis(2-chloroethoxy)methane	68		64		40-140	6		20
Hexachlorobutadiene	66		65		40-140	2		20
Hexachloroethane	67		62		40-140	8		20
Isophorone	69		66		40-140	4		20
Naphthalene	65		63		40-140	3		20
Nitrobenzene	79		75		40-140	5		20
Bis(2-ethylhexyl)phthalate	79		74		40-140	7		20
Butyl benzyl phthalate	67		66		40-140	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04,06-11,13-19 Batch: WG1487659-2 WG1487659-3								
Di-n-butylphthalate	65		63		40-140	3		20
Di-n-octylphthalate	78		74		40-140	5		20
Diethyl phthalate	67		64		40-140	5		20
Dimethyl phthalate	68		64		40-140	6		20
Benzo(a)anthracene	71		69		40-140	3		20
Benzo(a)pyrene	61		68		40-140	11		20
Benzo(b)fluoranthene	64		69		40-140	8		20
Benzo(k)fluoranthene	64		69		40-140	8		20
Chrysene	71		71		40-140	0		20
Acenaphthylene	65		62		40-140	5		20
Anthracene	70		68		40-140	3		20
Benzo(ghi)perylene	64		74		40-140	14		20
Fluorene	65		63		40-140	3		20
Phenanthrene	67		66		40-140	2		20
Dibenzo(a,h)anthracene	65		73		40-140	12		20
Indeno(1,2,3-cd)pyrene	63		72		40-140	13		20
Pyrene	59		61		40-140	3		20
Aniline	**35**	Q	**32**	Q	40-140	9		20
4-Chloroaniline	54		50		40-140	8		20
Dibenzofuran	65		62		40-140	5		20
2-Methylnaphthalene	66		64		40-140	3		20
Acetophenone	69		64		40-140	8		20
2,4,6-Trichlorophenol	74		71		30-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04,06-11,13-19 Batch: WG1487659-2 WG1487659-3								
2-Chlorophenol	73		68		30-130	7		20
2,4-Dichlorophenol	76		72		30-130	5		20
2,4-Dimethylphenol	69		64		30-130	8		20
2-Nitrophenol	97		92		30-130	5		20
4-Nitrophenol	56		56		30-130	0		20
2,4-Dinitrophenol	99		90		30-130	10		20
Pentachlorophenol	76		70		30-130	8		20
Phenol	49		46		30-130	6		20
2-Methylphenol	66		61		30-130	8		20
3-Methylphenol/4-Methylphenol	67		62		30-130	8		20
2,4,5-Trichlorophenol	75		72		30-130	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	74		68		15-110
Phenol-d6	61		57		15-110
Nitrobenzene-d5	80		75		30-130
2-Fluorobiphenyl	68		63		30-130
2,4,6-Tribromophenol	103		95		15-110
4-Terphenyl-d14	61		61		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-04,06-11,13-19 Batch: WG1487660-2 WG1487660-3								
Acenaphthene	75		79		40-140	5		20
2-Chloronaphthalene	74		80		40-140	8		20
Fluoranthene	86		88		40-140	2		20
Hexachlorobutadiene	74		79		40-140	7		20
Naphthalene	70		74		40-140	6		20
Benzo(a)anthracene	79		80		40-140	1		20
Benzo(a)pyrene	80		82		40-140	2		20
Benzo(b)fluoranthene	86		87		40-140	1		20
Benzo(k)fluoranthene	86		91		40-140	6		20
Chrysene	85		89		40-140	5		20
Acenaphthylene	74		81		40-140	9		20
Anthracene	76		79		40-140	4		20
Benzo(ghi)perylene	80		81		40-140	1		20
Fluorene	79		84		40-140	6		20
Phenanthrene	77		80		40-140	4		20
Dibenzo(a,h)anthracene	83		85		40-140	2		20
Indeno(1,2,3-cd)pyrene	79		79		40-140	0		20
Pyrene	87		90		40-140	3		20
2-Methylnaphthalene	71		76		40-140	7		20
Pentachlorophenol	92		97		30-130	5		20
Hexachlorobenzene	77		80		40-140	4		20
Hexachloroethane	65		71		40-140	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-04,06-11,13-19 Batch: WG1487660-2 WG1487660-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	57		64		15-110
Phenol-d6	52		56		15-110
Nitrobenzene-d5	98		106		30-130
2-Fluorobiphenyl	73		78		30-130
2,4,6-Tribromophenol	91		106		15-110
4-Terphenyl-d14	93		96		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-04,06-11,13-19 Batch: WG1488350-2 WG1488350-3								
1,4-Dioxane	105		108		40-140	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	44		44		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,09,11-12,15-16 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MW-BM03-04132021												
Perfluorooctanesulfonamide (FOSA)	ND	36.1	30.3F	84		33.0F	90		46-170	9		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	361	390	108		417	113		10-185	7		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	361	427	118		414	113		10-202	3		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	361	361	100		361	98		10-209	0		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	361	357	99		390	106		66-176	9		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		46		10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		51		10-189
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	55		54		10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	60		56		10-161
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		70		10-112

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,09,11-12,15-16 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MW-BM03-04132021												
Perfluorobutanoic Acid (PFBA)	0.525J	36.1	38.4	106		38.5	103		67-148	0		30
Perfluoropentanoic Acid (PFPeA)	ND	36.1	38.9	108		39.2	107		63-161	1		30
Perfluorobutanesulfonic Acid (PFBS)	ND	32	36.5	114		37.2	114		65-157	2		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	33.8	41.0	121		40.5	118		37-219	1		30
Perfluorohexanoic Acid (PFHxA)	0.443J	36.1	39.9	111		39.8	107		69-168	0		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	33.9	31.5	93		33.5	97		52-156	6		30
Perfluoroheptanoic Acid (PFHpA)	0.382J	36.1	39.4	109		39.5	106		58-159	0		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	33	33.7	102		34.5	103		69-177	2		30
Perfluorooctanoic Acid (PFOA)	2.95	36.1	41.6	115		43.3	110		63-159	4		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	34.4	40.0	116		43.0	123		49-187	7		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	34.4	38.5	112		39.5	113		61-179	3		30
Perfluorononanoic Acid (PFNA)	ND	36.1	41.0	114		40.3	110		68-171	2		30
Perfluorooctanesulfonic Acid (PFOS)	1.36J	33.5	37.4	112		37.9	107		52-151	1		30
Perfluorodecanoic Acid (PFDA)	ND	36.1	42.0	116		40.6	110		63-171	3		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	34.6	38.6	111		37.7	107		56-173	2		30
Perfluorononanesulfonic Acid (PFNS)	ND	34.7	35.4	102		34.6	98		48-150	2		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	36.1	41.5	115		44.6	121		60-166	7		30
Perfluoroundecanoic Acid (PFUnA)	ND	36.1	43.6	121		40.2	109		60-153	8		30
Perfluorodecanesulfonic Acid (PFDS)	ND	34.8	36.7	105		37.2	105		38-156	1		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	36.1	36.6	101		36.4	99		45-170	1		30
Perfluorododecanoic Acid (PFDoA)	ND	36.1	35.6	99		37.1	101		67-153	4		30
Perfluorotridecanoic Acid (PFTrDA)	ND	36.1	44.0	122		44.8	122		48-158	2		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,09,11-12,15-16 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MW-BM03-04132021												
Perfluorotetradecanoic Acid (PFTA)	ND	36.1	41.6	115		41.8	114		59-182	0		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	722	867	120		678	92		57-162	24		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	34.1	36.8	108		36.8	106		69-143	0		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	36.1	33.6	93		31.5	86		40-167	6		30
Perfluorooctadecanoic Acid (PFODA)	ND	36.1	34.7	96		39.5F	107		10-119	13		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	34.9	44.2	126		45.5	128		85-154	3		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	34.8	34.2	98		36.1	102		81-188	5		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	33.6	28.4	84		28.2	82		55-158	1		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	34.1	26.4	78		25.6	74		52-156	3		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	142		159		10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	103		110		12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**158**	Q	**160**	Q	14-147
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	74		88		10-165
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86		80		27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	73		74		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	84		87		55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	84		87		62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77		79		57-129

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,09,11-12,15-16 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MW-BM03-04132021

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		83		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	99		100		71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	95		92		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	92		92		22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	120		114		10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	88		93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	78		82		62-163
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		94		69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		89		62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	82		84		59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81		85		70-131

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04,06-11,13-19 QC Batch ID: WG1487659-4 WG1487659-5 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
1,2,4-Trichlorobenzene	ND	18.2	11	61		12	66		40-140	9		20
Bis(2-chloroethyl)ether	ND	18.2	13	72		14	77		40-140	7		20
1,2-Dichlorobenzene	ND	18.2	12	66		12	66		40-140	0		20
1,3-Dichlorobenzene	ND	18.2	11	61		12	66		40-140	9		20
1,4-Dichlorobenzene	ND	18.2	12	66		12	66		40-140	0		20
3,3'-Dichlorobenzidine	ND	18.2	11	61		12	66		40-140	9		20
2,4-Dinitrotoluene	ND	18.2	14	43		15	49		40-140	7		20
2,6-Dinitrotoluene	ND	18.2	14	**36**	Q	14	**36**	Q	40-140	0		20
Azobenzene	ND	18.2	13	72		13	72		40-140	0		20
4-Bromophenyl phenyl ether	ND	18.2	12	66		12	66		40-140	0		20
Bis(2-chloroisopropyl)ether	ND	18.2	13	72		13	72		40-140	0		20
Bis(2-chloroethoxy)methane	ND	18.2	12	66		13	72		40-140	8		20
Isophorone	ND	18.2	13	72		13	72		40-140	0		20
Nitrobenzene	ND	18.2	14	77		15	83		40-140	7		20
Bis(2-ethylhexyl)phthalate	2.2J	18.2	15	83		16	88		40-140	6		20
Butyl benzyl phthalate	ND	18.2	16	88		16	88		40-140	0		20
Di-n-butylphthalate	ND	18.2	13	72		14	77		40-140	7		20
Di-n-octylphthalate	ND	18.2	17	94		17	94		40-140	0		20
Diethyl phthalate	ND	18.2	12	66		14	77		40-140	15		20
Dimethyl phthalate	ND	18.2	13	72		14	77		40-140	7		20
Aniline	ND	18.2	5.0	**28**	Q	6.3	**35**	Q	40-140	**23**	Q	20
4-Chloroaniline	ND	18.2	8.4	46		9.0	50		40-140	7		20
Dibenzofuran	ND	18.2	12	66		13	72		40-140	8		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04,06-11,13-19 QC Batch ID: WG1487659-4 WG1487659-5 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
Acetophenone	ND	18.2	13	72		13	72		40-140	0		20
2,4,6-Trichlorophenol	ND	18.2	15	83		16	88		30-130	6		20
2-Chlorophenol	ND	18.2	13	72		14	77		30-130	7		20
2,4-Dichlorophenol	ND	18.2	13	72		14	77		30-130	7		20
2,4-Dimethylphenol	ND	18.2	8.7	48		12	66		30-130	**32**	Q	20
2-Nitrophenol	ND	18.2	17	94		18	99		30-130	6		20
4-Nitrophenol	ND	18.2	14	77		15	83		30-130	7		20
2,4-Dinitrophenol	ND	18.2	19J	100		21	120		30-130	10		20
Phenol	ND	18.2	10	55		11	61		30-130	10		20
2-Methylphenol	ND	18.2	12	66		13	72		30-130	8		20
3-Methylphenol/4-Methylphenol	ND	18.2	13	72		14	77		30-130	7		20
2,4,5-Trichlorophenol	ND	18.2	14	77		15	83		30-130	7		20

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	86		94		15-110
2-Fluorobiphenyl	74		78		30-130
2-Fluorophenol	77		80		15-110
4-Terphenyl-d14	76		76		30-130
Nitrobenzene-d5	83		83		30-130
Phenol-d6	67		68		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-04,06-11,13-19 QC Batch ID: WG1487660-4 WG1487660-5 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
Acenaphthene	ND	3.64	3.5	96		3.4	94		40-140	3		20
2-Chloronaphthalene	ND	3.64	3.6	99		3.5	96		40-140	3		20
Fluoranthene	ND	3.64	3.8	100		3.7	100		40-140	3		20
Hexachlorobutadiene	ND	3.64	3.7	100		3.5	96		40-140	6		20
Naphthalene	ND	3.64	3.4	94		3.2	88		40-140	6		20
Benzo(a)anthracene	ND	3.64	3.4	94		3.3	91		40-140	3		20
Benzo(a)pyrene	ND	3.64	3.5	96		3.4	94		40-140	3		20
Benzo(b)fluoranthene	ND	3.64	3.5	96		3.7	100		40-140	6		20
Benzo(k)fluoranthene	ND	3.64	3.8	100		3.5	96		40-140	8		20
Chrysene	ND	3.64	3.6	99		3.6	99		40-140	0		20
Acenaphthylene	ND	3.64	3.5	96		3.3	91		40-140	6		20
Anthracene	ND	3.64	3.4	94		3.3	91		40-140	3		20
Benzo(ghi)perylene	ND	3.64	3.4	94		3.3	91		40-140	3		20
Fluorene	ND	3.64	3.7	100		3.6	99		40-140	3		20
Phenanthrene	ND	3.64	3.4	94		3.3	91		40-140	3		20
Dibenzo(a,h)anthracene	ND	3.64	3.6	99		3.4	94		40-140	6		20
Indeno(1,2,3-cd)pyrene	ND	3.64	3.4	94		3.2	88		40-140	6		20
Pyrene	ND	3.64	3.9	110		3.7	100		40-140	5		20
2-Methylnaphthalene	ND	3.64	3.5	96		3.3	91		40-140	6		20
Pentachlorophenol	ND	3.64	4.9	130		4.1	110		30-130	18		20
Hexachlorobenzene	ND	3.64	3.6	99		3.4	94		40-140	6		20
Hexachloroethane	ND	3.64	3.2	88		3.0	83		40-140	6		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-04,06-11,13-19 QC Batch ID: WG1487660-4 WG1487660-5 QC Sample: L2118722-11 Client ID: MW-S30-04132021												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	25		26		15-110
2-Fluorobiphenyl	**20**	Q	**19**	Q	30-130
2-Fluorophenol	17		16		15-110
4-Terphenyl-d14	**22**	Q	**22**	Q	30-130
Nitrobenzene-d5	**26**	Q	**25**	Q	30-130
Phenol-d6	15		15		15-110

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-04,06-11,13-19 QC Batch ID: WG1488350-4 WG1488350-5 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
1,4-Dioxane	0.395	4.63	5.29	106		5.19	107		30-140	2		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		41		15-110

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-01 Date Collected: 04/13/21 09:15
Client ID: MW-SD26-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 08:02	44,353.2	MR
Nitrogen, Nitrate	3.2		mg/l	0.10	0.023	1	-	04/14/21 08:02	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-02
Client ID: PT-09-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 09:40
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.015	J	mg/l	0.050	0.014	1	-	04/14/21 07:58	44,353.2	MR
Nitrogen, Nitrate	0.027	J	mg/l	0.10	0.023	1	-	04/14/21 07:58	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-03
Client ID: BEW-4-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 09:45
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Alkalinity, Bicarbonate	77.8		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Nitrogen, Nitrite	0.033	J	mg/l	0.050	0.014	1	-	04/14/21 07:49	44,353.2	MR
Nitrogen, Nitrate	0.28		mg/l	0.10	0.023	1	-	04/14/21 07:49	44,353.2	MR
Phosphorus, Total	0.017		mg/l	0.010	0.004	1	04/20/21 10:15	04/21/21 11:54	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/14/21 01:59	121,4500P-E	AW
Dissolved Organic Carbon	0.36	J	mg/l	1.0	0.04	1	-	04/23/21 04:19	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.047	J	mg/l	0.050	0.013	1	-	04/19/21 17:33	44,300.0	SH
Chloride	51.4		mg/l	5.00	0.839	10	-	04/19/21 18:22	44,300.0	SH
Fluoride	0.078		mg/l	0.050	0.037	1	-	04/19/21 17:34	44,300.0	SH
Sulfate	21.2		mg/l	1.00	0.454	1	-	04/19/21 17:34	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-04
Client ID: HA20-CMT-4D1-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 10:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.051		mg/l	0.050	0.014	1	-	04/14/21 08:04	44,353.2	MR
Nitrogen, Nitrate	0.090	J	mg/l	0.10	0.023	1	-	04/14/21 08:04	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2118722
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-06 Date Collected: 04/13/21 11:05
Client ID: MW-BM03-04132021 Date Received: 04/13/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.027	J	mg/l	0.050	0.014	1	-	04/14/21 08:00	44,353.2	MR
Nitrogen, Nitrate	0.044	J	mg/l	0.10	0.023	1	-	04/14/21 08:00	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-07 | Date Collected: 04/13/21 12:00
Client ID: MW-BS10-04132021 | Date Received: 04/13/21
Sample Location: CONCORD, MA | Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Alkalinity, Bicarbonate	71.8		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 07:54	44,353.2	MR
Nitrogen, Nitrate	0.037	J	mg/l	0.10	0.023	1	-	04/14/21 07:54	44,353.2	MR
Phosphorus, Total	0.030		mg/l	0.010	0.004	1	04/20/21 10:15	04/21/21 11:55	121,4500P-E	SD
Phosphorus, Orthophosphate	0.017		mg/l	0.005	0.001	1	-	04/14/21 01:59	121,4500P-E	AW
Dissolved Organic Carbon	0.61	J	mg/l	1.0	0.04	1	-	04/23/21 04:19	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.035	J	mg/l	0.050	0.013	1	-	04/19/21 18:33	44,300.0	SH
Chloride	8.46		mg/l	0.500	0.083	1	-	04/19/21 18:34	44,300.0	SH
Fluoride	0.246		mg/l	0.050	0.037	1	-	04/19/21 18:34	44,300.0	SH
Sulfate	18.2		mg/l	1.00	0.454	1	-	04/19/21 18:34	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-08
Client ID: MW-T10-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 09:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 07:56	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/14/21 07:56	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-09
Client ID: EQ BLANK1-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:00
Date Received: 04/13/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/22/21 12:10	121,2320B	JB
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/22/21 12:10	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 08:14	44,353.2	MR
Nitrogen, Nitrate	0.055	J	mg/l	0.10	0.023	1	-	04/14/21 08:14	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/20/21 10:15	04/21/21 11:56	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/14/21 02:00	121,4500P-E	AW
Dissolved Organic Carbon	0.15	J	mg/l	1.0	0.04	1	-	04/23/21 04:19	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/19/21 20:10	44,300.0	SH
Chloride	0.213	J	mg/l	0.500	0.083	1	-	04/19/21 20:11	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/19/21 20:11	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/19/21 20:11	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-10
Client ID: MW-BS13-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 12:10
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 08:15	44,353.2	MR
Nitrogen, Nitrate	0.037	J	mg/l	0.10	0.023	1	-	04/14/21 08:15	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/19/21 18:57	44,300.0	SH
Chloride	32.5		mg/l	0.500	0.083	1	-	04/19/21 18:58	44,300.0	SH
Fluoride	0.122		mg/l	0.050	0.037	1	-	04/19/21 18:58	44,300.0	SH
Sulfate	279.		mg/l	10.0	4.54	10	-	04/19/21 19:59	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-11
Client ID: MW-S30-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 12:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 07:33	44,353.2	MR
Nitrogen, Nitrate	2.9		mg/l	0.10	0.023	1	-	04/14/21 07:33	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-13
Client ID: HA20-CMT-5S-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 13:05
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 08:01	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/14/21 08:01	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-14
Client ID: HA-09-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 14:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.017	J	mg/l	0.050	0.014	1	-	04/14/21 07:43	44,353.2	MR
Nitrogen, Nitrate	0.056	J	mg/l	0.10	0.023	1	-	04/14/21 07:43	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2118722
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-15
Client ID: MW-SO26-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 14:55
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 08:13	44,353.2	MR
Nitrogen, Nitrate	3.1		mg/l	0.10	0.023	1	-	04/14/21 08:13	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-16
Client ID: MW-SO26-04132021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:00
Date Received: 04/13/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 08:11	44,353.2	MR
Nitrogen, Nitrate	3.1		mg/l	0.10	0.023	1	-	04/14/21 08:11	44,353.2	MR

Project Name: NUCLEAR METALS

Lab Number: L2118722

Project Number: 3252H

Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-17

Date Collected: 04/13/21 15:10

Client ID: HA20-CMT-5I-04132021

Date Received: 04/13/21

Sample Location: CONCORD, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 08:06	44,353.2	MR
Nitrogen, Nitrate	2.9		mg/l	0.10	0.023	1	-	04/14/21 08:06	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2118722-18 | Date Collected: 04/13/21 11:50
Client ID: GZW-8-1-04132021 | Date Received: 04/13/21
Sample Location: CONCORD, MA | Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 08:05	44,353.2	MR
Nitrogen, Nitrate	1.8		mg/l	0.10	0.023	1	-	04/14/21 08:05	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.043	J	mg/l	0.050	0.013	1	-	04/19/21 19:11	44,300.0	SH
Chloride	64.5		mg/l	5.00	0.839	10	-	04/19/21 20:47	44,300.0	SH
Fluoride	0.064		mg/l	0.050	0.037	1	-	04/19/21 19:10	44,300.0	SH
Sulfate	10.9		mg/l	1.00	0.454	1	-	04/19/21 19:10	44,300.0	SH

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2118722-19	Date Collected:	04/13/21 13:05
Client ID:	P1-A-04132021	Date Received:	04/13/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 07:57	44,353.2	MR
Nitrogen, Nitrate	2.3		mg/l	0.10	0.023	1	-	04/14/21 07:57	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2118722
Project Number: 3252H | **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 03,07,09 Batch: WG1485910-1										
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/14/21 01:58	121,4500P-E	AW
General Chemistry - Westborough Lab for sample(s): 01-04,06-11 Batch: WG1485918-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/14/21 06:00	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-04,06-11 Batch: WG1485919-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 06:03	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 13-19 Batch: WG1485920-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/14/21 06:00	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 13-19 Batch: WG1485921-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/14/21 06:03	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab for sample(s): 03,07,09-10,18 Batch: WG1488176-1										
Chloride	0.211	J	mg/l	0.500	0.083	1	-	04/19/21 16:57	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/19/21 16:57	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/19/21 16:57	44,300.0	SH
General Chemistry - Westborough Lab for sample(s): 03,07,09 Batch: WG1488296-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/20/21 10:15	04/21/21 11:44	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 03,07 Batch: WG1488991-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 03,07 Batch: WG1488992-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 09 Batch: WG1489458-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/22/21 12:10	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 09 Batch: WG1489460-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/22/21 12:10	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 03,07,09 Batch: WG1489725-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	04/23/21 04:19	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 07,09-10,18 Batch: WG1502651-1										
Bromide	ND		mg/l	0.050	0.013	1	-	04/19/21 16:57	44,300.0	SH
Anions by Ion Chromatography - Westborough Lab for sample(s): 03 Batch: WG1503279-1										
Bromide	ND		mg/l	0.050	0.013	1	-	04/19/21 16:57	44,300.0	SH

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 03,07,09 Batch: WG1485910-2								
Phosphorus, Orthophosphate	91		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 Batch: WG1485918-2								
Nitrogen, Nitrate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 Batch: WG1485919-2								
Nitrogen, Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 13-19 Batch: WG1485920-2								
Nitrogen, Nitrate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 13-19 Batch: WG1485921-2								
Nitrogen, Nitrite	98		-		90-110	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 03,07,09-10,18 Batch: WG1488176-2								
Chloride	102		-		90-110	-		
Fluoride	96		-		90-110	-		
Sulfate	96		-		90-110	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 03,07,09 Batch: WG1488296-2					
Phosphorus, Total	99	-	80-120	-	
General Chemistry - Westborough Lab Associated sample(s): 03,07,09 Batch: WG1489725-2					
Dissolved Organic Carbon	101	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 07,09-10,18 Batch: WG1502651-2					
Bromide	99	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 03 Batch: WG1503279-2					
Bromide	99	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 03,07,09 QC Batch ID: WG1485910-4 QC Sample: L2118722-07 Client ID: MW-BS10-04132021												
Phosphorus, Orthophosphate	0.017	0.5	0.531	103		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 QC Batch ID: WG1485918-4 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
Nitrogen, Nitrate	2.9	4	6.8	98		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 QC Batch ID: WG1485919-4 QC Sample: L2118722-11 Client ID: MW-S30-04132021												
Nitrogen, Nitrite	ND	4	4.3	108		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 13-19 QC Batch ID: WG1485920-4 QC Sample: L2118722-14 Client ID: HA-09-04132021												
Nitrogen, Nitrate	0.056J	4	4.0	100		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 13-19 QC Batch ID: WG1485921-4 QC Sample: L2118722-14 Client ID: HA-09-04132021												
Nitrogen, Nitrite	0.017J	4	5.2	**130**	Q	-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 03,07,09-10,18 QC Batch ID: WG1488176-3 QC Sample: L2118722-07 Client ID: MW-BS10-04132021												
Chloride	8.46	4	12.4	97		-	-		90-110	-		18
Fluoride	0.246	0.4	0.623	94		-	-		90-110	-		15
Sulfate	18.2	8	24.4	**78**	Q	-	-		90-110	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 07,09-10,18 QC Batch ID: WG1502651-3 QC Sample: L2118722-07 Client ID: MW-BS10-04132021												
Bromide	0.035J	0.4	0.305	**76**	Q	-	-		90-110	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 03,07,09 QC Batch ID: WG1485910-3 QC Sample: L2118722-07 Client ID: MW-BS10-04132021						
Phosphorus, Orthophosphate	0.017	0.016	mg/l	6		20
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 QC Batch ID: WG1485918-3 QC Sample: L2118722-11 Client ID: MW-S30-04132021						
Nitrogen, Nitrate	2.9	2.9	mg/l	0		6
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 QC Batch ID: WG1485919-3 QC Sample: L2118722-11 Client ID: MW-S30-04132021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 13-19 QC Batch ID: WG1485920-3 QC Sample: L2118722-14 Client ID: HA-09-04132021						
Nitrogen, Nitrate	0.056J	0.031J	mg/l	NC		6
General Chemistry - Westborough Lab Associated sample(s): 13-19 QC Batch ID: WG1485921-3 QC Sample: L2118722-14 Client ID: HA-09-04132021						
Nitrogen, Nitrite	0.017J	ND	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 03,07,09-10,18 QC Batch ID: WG1488176-4 QC Sample: L2118722-07 Client ID: MW-BS10-04132021						
Chloride	8.46	8.48	mg/l	0		18
Fluoride	0.246	0.258	mg/l	5		15
Sulfate	18.2	18.1	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 09 QC Batch ID: WG1489460-2 QC Sample: L2118722-09 Client ID: EQ BLANK1-04132021						
Alkalinity, Carbonate	ND	ND	mg CaCO3/L	NC		10

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 07,09-10,18 QC Batch ID: WG1502651-4 QC Sample: L2118722-07 Client ID: MW-BS10-04132021					
Bromide	0.035J	0.035J	mg/l	NC	20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent
E	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118722-01A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-01B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-01C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-01D	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-01E	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-01F	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-01G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-01H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-02A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-02B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-02C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-02D	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-02E	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-02F	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-02G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-02H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-03A	Vial HCl preserved	C	NA		4.0	Y	Absent		MCP-8260-10(14)
L2118722-03B	Vial HCl preserved	C	NA		4.0	Y	Absent		MCP-8260-10(14)
L2118722-03C	Vial HCl preserved	C	NA		4.0	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118722-03D	Vial H2SO4 preserved	C	NA		4.0	Y	Absent		DOC-9060(28)
L2118722-03E	Vial H2SO4 preserved	C	NA		4.0	Y	Absent		DOC-9060(28)
L2118722-03F	Vial H2SO4 preserved	C	NA		4.0	Y	Absent		DOC-9060(28)
L2118722-03G	Plastic 250ml unpreserved/No Headspace	C	NA		4.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118722-03H	Plastic 250ml H2SO4 preserved	C	<2	<2	4.0	Y	Absent		TPHOS-4500(28)
L2118722-03I	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-03J	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-03K	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-03L	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-03M	Plastic 500ml unpreserved	C	7	7	4.0	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118722-04A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-04B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-04C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-04D	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-04E	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-04F	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-04G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-04H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-05A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-05B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-06A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-06B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-06C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-06D	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-06E	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-06F	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-06G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-06H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118722-06I	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-06I1	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-06I2	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-06J	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-06J1	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-06J2	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-07A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-07B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-07C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-07D	Vial H2SO4 preserved	A	NA		2.1	Y	Absent		DOC-9060(28)
L2118722-07E	Vial H2SO4 preserved	A	NA		2.1	Y	Absent		DOC-9060(28)
L2118722-07F	Vial H2SO4 preserved	A	NA		2.1	Y	Absent		DOC-9060(28)
L2118722-07G	Plastic 250ml unpreserved/No Headspace	A	NA		2.1	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118722-07H	Plastic 250ml H2SO4 preserved	A	<2	<2	2.1	Y	Absent		TPHOS-4500(28)
L2118722-07I	Amber 250ml unpreserved	A	7	7	2.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-07J	Amber 250ml unpreserved	A	7	7	2.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-07K	Amber 250ml unpreserved	A	7	7	2.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-07L	Amber 250ml unpreserved	A	7	7	2.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-07M	Plastic 500ml unpreserved	A	7	7	2.1	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118722-08A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-08B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-08C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-08D	Plastic 120ml unpreserved	C	7	7	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-08E	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-08F	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-08G	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-08H	Amber 250ml unpreserved	C	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-09A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118722-09B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-09C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-09D	Vial H2SO4 preserved	A	NA		2.1	Y	Absent		DOC-9060(28)
L2118722-09E	Vial H2SO4 preserved	A	NA		2.1	Y	Absent		DOC-9060(28)
L2118722-09F	Vial H2SO4 preserved	A	NA		2.1	Y	Absent		DOC-9060(28)
L2118722-09G	Plastic 120ml unpreserved	B	7	7	2.3	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2118722-09H	Plastic 250ml unpreserved/No Headspace	A	NA		2.1	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2118722-09I	Plastic 250ml unpreserved	A	7	7	2.1	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2118722-09J	Plastic 250ml H2SO4 preserved	A	<2	<2	2.1	Y	Absent		TPHOS-4500(28)
L2118722-09K	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-09L	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-09M	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-09N	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-09O	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-09P	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-10A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-10B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-10C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-10D	Plastic 120ml unpreserved	E	7	7	5.1	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118722-10E	Plastic 250ml unpreserved	E	7	7	5.1	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118722-10F	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-10G	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-10H	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-10I	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-11A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-11A1	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-11A2	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118722-11B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-11B1	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-11B2	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-11C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-11C1	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-11C2	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-11D	Plastic 120ml unpreserved	E	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-11D1	Plastic 120ml unpreserved	E	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-11D2	Plastic 120ml unpreserved	E	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-11E	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-11E1	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-11E2	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-11F	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-11F1	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-11F2	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-11G	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-11G1	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-11G2	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-11H	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-11H1	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-11H2	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-11I	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-11J	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-12A	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-13A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-13B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-13C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-13D	Plastic 120ml unpreserved	E	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118722-13E	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-13F	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-13G	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-13H	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-14A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-14B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-14C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-14D	Plastic 120ml unpreserved	E	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-14E	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-14F	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-14G	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-14H	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-15A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-15B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-15C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-15D	Plastic 120ml unpreserved	E	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-15E	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-15F	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-15G	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-15H	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-15I	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-15J	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-16A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-16B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-16C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-16D	Plastic 120ml unpreserved	E	7	7	5.1	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-16E	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-16F	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2118722
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118722-16G	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-16H	Amber 250ml unpreserved	E	7	7	5.1	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-16I	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-16J	Plastic 250ml unpreserved	D	NA		3.4	Y	Absent		A2-537-ISOTOPE-36(14)
L2118722-17A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-17B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-17C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-17D	Plastic 120ml unpreserved	B	7	7	2.3	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-17E	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-17F	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-17G	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-17H	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-18A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-18B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-18C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-18D	Plastic 120ml unpreserved	B	7	7	2.3	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118722-18E	Plastic 120ml unpreserved	B	7	7	2.3	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118722-18F	Plastic 120ml unpreserved	B	7	7	2.3	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2118722-18G	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-18H	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-18I	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-18J	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-19A	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-19B	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-19C	Vial HCl preserved	A	NA		2.1	Y	Absent		MCP-8260-10(14)
L2118722-19D	Plastic 120ml unpreserved	B	7	7	2.3	Y	Absent		NO2-353(2),NO3-353(2)
L2118722-19E	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2118722-19F	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2118722-19G	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2118722-19H	Amber 250ml unpreserved	B	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	NUCLEAR METALS	**Lab Number:**	L2118722
Project Number:	3252H	**Report Date:**	05/25/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF COSTODY

PAGE 1 OF 2

ALPHA ANALYTICAL
World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/13/21

ALPHA Job #: L2118722

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program	Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
18722-01	MW-SD26-04132021	4/13/21	9:15	GW	DAP	X	X	X	X										8
-02	PT-09-04132021	4/13/21	9:40	GW	FHM	X	X	X	X										8
-03	BEW-4-04132021	4/13/21	9:45	GW	SRB	X	X	X	X	X	X	X	X	X					14
-04	HA20-CMT-4D1-04132021	4/13/21	10:10	GW	ELL	X	X	X	X										8
-05	Trip Blank1-04132021	3/30/21	–	TB	PC	X													2
-06	MW-BM03-04132021	4/13/21	11:05	GW	ZM	X	X	X	X						X			MS/MSD PFAS ONLY	14
-07	MW-BS10-04132021	4/13/21	12:00	GW	PB	X	X	X	X	X	X	X	X	X					14
-08	MW-T10-04132021	4/13/21	9:10	GW	PB	X	X	X	X										8
-09	EQ Blank1-04132021	4/13/21	13:00	EB	NH	X	X	X	X	X	X	X	X	X	X				16
-10	MW-BS13-04132021	4/13/21	12:10	GW	CF	X	X	X	X				X						9
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/13/21 1633	[signature]	4/13/21 1633
[signature]	4-13-21 1730	[signature]	4-13-21 1730

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

ALPHA ANALYTICAL

CHAIN OF CUSTODY

PAGE 2 OF 2

Date Rec'd in Lab: 4/13/21

ALPHA Job #: L2118722

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Project Information

Project Name: Nuclear Metals

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Project Manager: Nathan Hunt

ALPHA Quote #:

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Phone: 978-793-7163

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☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report
*MS/MSD for VOC, SVOC, 1,4D & NO3/NO2 ONLY

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
18722-11	MW-S30-04132021	4/13/21	12:55	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐	**MS/MSD	26
-12	Field Blank1-04132021	4/13/21	13:00	FB	FHM	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐		2
-13	HA20-CMT-5S-04132021	4/13/21	13:05	GW	ELL	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-14	HA-09-04132021	4/13/21	14:55	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-15	MW-S06-04132021	4/13/21	14:55	GW	SRB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
-16	MW-S06-04132021DUP	4/13/21	15:00	GW	SRB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
-17	HA20-CMT-5I-04132021	4/13/21	15:10	GW	ELL	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-18	GZW-6-1-04132021	4/13/21	11:50	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐		10
-19	P1-A-04132021	4/13/21	13:05	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/13/21 1633	[signature] AAL	4-13-21 1633
[signature] AAL	4-13-21 1730	[signature]	4-13-21 1730

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118722**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487778-5**	**Lab File ID**	**: J210418A05**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/18/21 04:39**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487778-3LCS	WG1487778-3	04/18/21 03:17
WG1487778-4LCSD	WG1487778-4	04/18/21 03:58
TRIP BLANK1-04132021	L2118722-05	04/18/21 08:05

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118722**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1490552-5**	**Lab File ID**	**: J210425B07**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/25/21 07:28**

Client Sample No.	Lab Sample ID	Analysis Date
WG1490552-3LCS	WG1490552-3	04/25/21 06:05
WG1490552-4LCSD	WG1490552-4	04/25/21 06:46
MW-SD26-04132021	L2118722-01	04/25/21 10:13
PT-09-04132021	L2118722-02	04/25/21 10:55
BEW-4-04132021	L2118722-03	04/25/21 11:36
HA20-CMT-4D1-04132021	L2118722-04	04/25/21 12:18
MW-BM03-04132021	L2118722-06	04/25/21 13:00
MW-BS10-04132021	L2118722-07	04/25/21 13:42
MW-T10-04132021	L2118722-08	04/25/21 14:24
MW-S30-04132021	L2118722-11	04/25/21 15:05
MW-S30-04132021MS	WG1490552-6	04/25/21 15:47
MW-S30-04132021MSD	WG1490552-7	04/25/21 16:29

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118722**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1490642-5**	**Lab File ID**	**: J210426A05**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/26/21 03:41**

Client Sample No.	Lab Sample ID	Analysis Date
WG1490642-3LCS	WG1490642-3	04/26/21 02:17
WG1490642-4LCSD	WG1490642-4	04/26/21 02:59
EQ BLANK1-04132021	L2118722-09	04/26/21 04:23
MW-BS13-04132021	L2118722-10	04/26/21 05:04
HA20-CMT-5S-04132021	L2118722-13	04/26/21 05:45
HA-09-04132021	L2118722-14	04/26/21 06:27
MW-SO26-04132021	L2118722-15	04/26/21 07:08
MW-SO26-04132021 DUP	L2118722-16	04/26/21 07:49
HA20-CMT-5I-04132021	L2118722-17	04/26/21 08:30
GZW-8-1-04132021	L2118722-18	04/26/21 09:11
P1-A-04132021	L2118722-19	04/26/21 09:52

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118722
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/18/21 03:17
Lab File ID	: J210418A01	Init. Calib. Date(s)	: 04/06/21 04/06/21
Sample No	: WG1487778-2	Init. Calib. Times	: 06:51 15:03
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	74	0
Dichlorodifluoromethane	1.063	1.159	-	-9	20	73	0
Chloromethane	1.777	2.314	-	-30.2*	20	83	0
Vinyl chloride	2.131	2.369	-	-11.2	20	72	0
Bromomethane	10	9.598	-	4	20	64	0
Chloroethane	1.132	1.421	-	-25.5*	20	78	0
Trichlorofluoromethane	1.963	2.217	-	-12.9	20	76	0
Ethyl ether	0.811	0.866	-	-6.8	20	74	0
1,1-Dichloroethene	1.225	1.325	-	-8.2	20	74	0
Carbon disulfide	4.134	4.812	-	-16.4	20	78	0
Freon-113	1.249	1.442	-	-15.5	20	79	0
Acrolein	0.195	0.212	-	-8.7	20	74	0
Methylene chloride	1.42	1.701	-	-19.8	20	80	0
Acetone	0.421	0.582	-	-38.2*	20	92	0
trans-1,2-Dichloroethene	1.295	1.433	-	-10.7	20	77	0
Methyl acetate	1.123	1.488	-	-32.5*	20	94	0
Methyl tert-butyl ether	3.731	3.748	-	-0.5	20	75	0
tert-Butyl alcohol	0.112	0.127	-	-13.4	20	89	0
Diisopropyl ether	5.416	6.354	-	-17.3	20	83	0
1,1-Dichloroethane	3.15	3.865	-	-22.7*	20	81	0
Halothane	0.935	1.076	-	-15.1	20	80	0
Acrylonitrile	0.54	0.69	-	-27.8*	20	85	0
Ethyl tert-butyl ether	4.546	4.837	-	-6.4	20	79	0
Vinyl acetate	3.97	4.528	-	-14.1	20	85	0
cis-1,2-Dichloroethene	1.495	1.634	-	-9.3	20	75	0
2,2-Dichloropropane	2.269	2.607	-	-14.9	20	82	0
Bromochloromethane	0.579	0.664	-	-14.7	20	81	0
Cyclohexane	3.039	3.58	-	-17.8	20	79	0
Chloroform	2.689	3.062	-	-13.9	20	78	0
Ethyl acetate	1.446	1.759	-	-21.6*	20	91	0
Carbon tetrachloride	1.62	1.835	-	-13.3	20	78	0
Tetrahydrofuran	0.434	0.549	-	-26.5*	20	83	0
Dibromofluoromethane	0.243	0.249	-	-2.5	20	78	0
1,1,1-Trichloroethane	2.087	2.306	-	-10.5	20	76	0
2-Butanone	0.63	0.791	-	-25.6*	20	92	0
1,1-Dichloropropene	2.06	2.23	-	-8.3	20	74	0
Benzene	6.094	6.81	-	-11.7	20	79	0
tert-Amyl methyl ether	3.752	3.554	-	5.3	20	71	0
1,2-Dichloroethane-d4	0.4	0.415	-	-3.7	20	77	0
1,2-Dichloroethane	2.172	2.549	-	-17.4	20	80	0
Methyl cyclohexane	2.718	2.852	-	-4.9	20	74	0
Trichloroethene	1.386	1.515	-	-9.3	20	77	0
Dibromomethane	0.835	0.916	-	-9.7	20	78	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2118722**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Instrument ID	**: JACK**	**Calibration Date**	**: 04/18/21 03:17**
Lab File ID	**: J210418A01**	**Init. Calib. Date(s)**	**: 04/06/21 04/06/21**
Sample No	**: WG1487778-2**	**Init. Calib. Times**	**: 06:51 15:03**
Channel	**:**		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	1.734	1.948	-	-12.3	20	79	0
2-Chloroethyl vinyl ether	0.93	0.82	-	11.8	20	65	0
Bromodichloromethane	2.051	2.265	-	-10.4	20	78	0
1,4-Dioxane	0.011	0.012*	-	-9.1	20	81	0
cis-1,3-Dichloropropene	2.48	2.694	-	-8.6	20	78	0
Chlorobenzene-d5	1	1	-	0	20	69	0
Toluene-d8	1.295	1.323	-	-2.2	20	68	0
Toluene	4.665	5.107	-	-9.5	20	72	0
4-Methyl-2-pentanone	0.633	0.65	-	-2.7	20	75	0
Tetrachloroethene	1.509	1.705	-	-13	20	83	0
trans-1,3-Dichloropropene	2.822	3.297	-	-16.8	20	78	0
Ethyl methacrylate	2.319	2.27	-	2.1	20	67	0
1,1,2-Trichloroethane	1.359	1.571	-	-15.6	20	79	0
Chlorodibromomethane	1.446	1.617	-	-11.8	20	81	0
1,3-Dichloropropane	2.89	3.358	-	-16.2	20	80	0
1,2-Dibromoethane	1.36	1.532	-	-12.6	20	80	0
2-Hexanone	1.159	1.328	-	-14.6	20	77	0
Chlorobenzene	4.762	5.231	-	-9.8	20	75	0
Ethylbenzene	9.087	10.254	-	-12.8	20	72	0
1,1,1,2-Tetrachloroethane	1.447	1.615	-	-11.6	20	80	0
p/m Xylene	3.498	3.924	-	-12.2	20	73	0
o Xylene	3.305	3.664	-	-10.9	20	71	0
Styrene	5.661	6.569	-	-16	20	74	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	78	0
Bromoform	10	9.159	-	8.4	20	84	0
Isopropylbenzene	17.237	16.407	-	4.8	20	71	0
4-Bromofluorobenzene	1.006	0.864	-	14.1	20	68	0
Bromobenzene	3.515	3.403	-	3.2	20	84	0
n-Propylbenzene	23.158	23.88	-	-3.1	20	75	0
1,4-Dichlorobutane	6.223	6.886	-	-10.7	20	81	0
1,1,2,2-Tetrachloroethane	10	11.243	-	-12.4	20	82	0
4-Ethyltoluene	16.64	16.762	-	-0.7	20	75	0
2-Chlorotoluene	15.112	15.412	-	-2	20	75	0
1,3,5-Trimethylbenzene	14.217	14.283	-	-0.5	20	76	0
1,2,3-Trichloropropane	3.239	3.511	-	-8.4	20	79	0
trans-1,4-Dichloro-2-buten	1.298	1.46	-	-12.5	20	78	0
4-Chlorotoluene	13.612	13.677	-	-0.5	20	74	0
tert-Butylbenzene	11.914	11.664	-	2.1	20	74	0
1,2,4-Trimethylbenzene	13.724	13.66	-	0.5	20	76	0
sec-Butylbenzene	17.277	17.662	-	-2.2	20	74	0
p-Isopropyltoluene	14.39	14.572	-	-1.3	20	75	0
1,3-Dichlorobenzene	7.305	7.394	-	-1.2	20	79	0
1,4-Dichlorobenzene	7.308	7.349	-	-0.6	20	81	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2118722	
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H	
Instrument ID	: JACK	**Calibration Date**	: 04/18/21 03:17	
Lab File ID	: J210418A01	**Init. Calib. Date(s)**	: 04/06/21	04/06/21
Sample No	: WG1487778-2	**Init. Calib. Times**	: 06:51	15:03
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	8.273	8.13	-	1.7	20	76	0
n-Butylbenzene	14.883	15.819	-	-6.3	20	78	0
1,2-Dichlorobenzene	6.648	6.68	-	-0.5	20	80	0
1,2,4,5-Tetramethylbenzene	10.716	9.35	-	12.7	20	73	0
1,2-Dibromo-3-chloropropan	0.466	0.457	-	1.9	20	84	0
1,3,5-Trichlorobenzene	4.04	4.158	-	-2.9	20	91	0
Hexachlorobutadiene	10	11.321	-	-13.2	20	94	0
1,2,4-Trichlorobenzene	10	10.103	-	-1	20	84	0
Naphthalene	8.515	8.186	-	3.9	20	80	0
1,2,3-Trichlorobenzene	2.936	3.001	-	-2.2	20	89	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2118722
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Instrument ID	: JACK	**Calibration Date**	: 04/25/21 06:05
Lab File ID	: J210425B03	**Init. Calib. Date(s)**	: 04/20/21 04/20/21
Sample No	: WG1490552-2	**Init. Calib. Times**	: 06:07 12:57
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	98	0
Dichlorodifluoromethane	1.542	1.669	-	-8.2	20	93	0
Chloromethane	2.252	2.392	-	-6.2	20	98	0
Vinyl chloride	1.971	2.204	-	-11.8	20	97	0
Bromomethane	10	11.033	-	-10.3	20	101	0
Chloroethane	1.198	1.323	-	-10.4	20	98	0
Trichlorofluoromethane	2.788	3.383	-	-21.3*	20	107	0
Ethyl ether	0.889	1.032	-	-16.1	20	109	0
1,1-Dichloroethene	1.608	1.899	-	-18.1	20	107	0
Carbon disulfide	4.761	5.597	-	-17.6	20	106	0
Methylene chloride	1.728	2.02	-	-16.9	20	107	0
Acetone	0.545	0.6	-	-10.1	20	104	0
trans-1,2-Dichloroethene	1.648	1.975	-	-19.8	20	110	0
Methyl tert-butyl ether	4.021	4.687	-	-16.6	20	115	0
Diisopropyl ether	6.261	7.038	-	-12.4	20	110	0
1,1-Dichloroethane	3.488	3.998	-	-14.6	20	104	0
Ethyl tert-butyl ether	4.857	5.487	-	-13	20	110	0
cis-1,2-Dichloroethene	1.889	2.248	-	-19	20	110	0
2,2-Dichloropropane	2.736	3.306	-	-20.8*	20	116	0
Bromochloromethane	0.897	1.054	-	-17.5	20	107	0
Chloroform	3.289	3.675	-	-11.7	20	99	0
Carbon tetrachloride	2.644	3.117	-	-17.9	20	109	0
Tetrahydrofuran	0.539	0.625	-	-16	20	108	0
Dibromofluoromethane	0.29	0.281	-	3.1	20	101	0
1,1,1-Trichloroethane	2.893	3.402	-	-17.6	20	109	0
2-Butanone	0.765	0.874	-	-14.2	20	108	0
1,1-Dichloropropene	2.301	2.849	-	-23.8*	20	114	0
Benzene	6.631	7.73	-	-16.6	20	109	0
tert-Amyl methyl ether	3.944	4.43	-	-12.3	20	113	0
1,2-Dichloroethane-d4	0.391	0.339	-	13.3	20	90	0
1,2-Dichloroethane	2.572	2.845	-	-10.6	20	104	0
Trichloroethene	1.748	2.145	-	-22.7*	20	113	0
Dibromomethane	1.104	1.244	-	-12.7	20	108	0
1,2-Dichloropropane	1.79	2.065	-	-15.4	20	111	0
Bromodichloromethane	2.457	2.816	-	-14.6	20	107	0
1,4-Dioxane	0.012	0.015*	-	-25*	20	124	0
cis-1,3-Dichloropropene	2.784	3.294	-	-18.3	20	112	0
Chlorobenzene-d5	1	1	-	0	20	101	0
Toluene-d8	1.15	1.165	-	-1.3	20	101	0
Toluene	4.965	5.672	-	-14.2	20	110	0
4-Methyl-2-pentanone	0.596	0.605	-	-1.5	20	108	0
Tetrachloroethene	2.321	2.84	-	-22.4*	20	118	0
trans-1,3-Dichloropropene	10	11.076	-	-10.8	20	112	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2118722
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Instrument ID	: JACK	**Calibration Date**	: 04/25/21 06:05
Lab File ID	: J210425B03	**Init. Calib. Date(s)**	: 04/20/21 04/20/21
Sample No	: WG1490552-2	**Init. Calib. Times**	: 06:07 12:57
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	1.356	1.515	-	-11.7	20	111	0
Chlorodibromomethane	1.961	2.202	-	-12.3	20	112	0
1,3-Dichloropropane	2.782	3.11	-	-11.8	20	110	0
1,2-Dibromoethane	1.63	1.824	-	-11.9	20	110	0
2-Hexanone	1.263	1.318	-	-4.4	20	104	0
Chlorobenzene	5.757	6.727	-	-16.8	20	114	0
Ethylbenzene	9.387	11.472	-	-22.2*	20	109	0
1,1,1,2-Tetrachloroethane	1.992	2.308	-	-15.9	20	118	0
p/m Xylene	3.789	4.711	-	-24.3*	20	109	0
o Xylene	3.595	4.436	-	-23.4*	20	111	0
Styrene	20	23.216	-	-16.1	20	107	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	96	0
Bromoform	2.359	2.596	-	-10	20	115	0
Isopropylbenzene	17.473	20.62	-	-18	20	110	0
4-Bromofluorobenzene	0.8	0.829	-	-3.6	20	102	0
Bromobenzene	4.366	5.015	-	-14.9	20	113	0
n-Propylbenzene	21.642	26	-	-20.1*	20	108	0
1,1,2,2-Tetrachloroethane	3.387	3.62	-	-6.9	20	105	0
2-Chlorotoluene	14.23	16.799	-	-18.1	20	105	0
1,3,5-Trimethylbenzene	14.552	20.42	-	-40.3*	20	129	-.1
1,2,3-Trichloropropane	3.058	3.236	-	-5.8	20	105	0
4-Chlorotoluene	13.04	15.293	-	-17.3	20	109	0
tert-Butylbenzene	12.872	15.735	-	-22.2*	20	111	0
1,2,4-Trimethylbenzene	13.954	16.456	-	-17.9	20	110	0
sec-Butylbenzene	17.612	21.33	-	-21.1*	20	109	0
p-Isopropyltoluene	10	11.682	-	-16.8	20	112	0
1,3-Dichlorobenzene	8.882	10.378	-	-16.8	20	110	0
1,4-Dichlorobenzene	8.812	10.363	-	-17.6	20	111	0
n-Butylbenzene	14.08	16.834	-	-19.6	20	108	0
1,2-Dichlorobenzene	8.245	9.446	-	-14.6	20	110	0
1,2-Dibromo-3-chloropropan	0.605	0.705	-	-16.5	20	112	0
Hexachlorobutadiene	2.239	2.84	-	-26.8*	20	120	0
1,2,4-Trichlorobenzene	4.502	5.287	-	-17.4	20	120	0
Naphthalene	10.045	10.845	-	-8	20	113	0
1,2,3-Trichlorobenzene	4.247	4.9	-	-15.4	20	117	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2118722		
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H		
Instrument ID	: JACK	**Calibration Date**	: 04/26/21 02:17		
Lab File ID	: J210426A01	**Init. Calib. Date(s)**	: 04/20/21	04/20/21	
Sample No	: WG1490642-2	**Init. Calib. Times**	: 06:07	12:57	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	105	0
Dichlorodifluoromethane	1.542	1.304	-	15.4	20	78	0
Chloromethane	2.252	1.952	-	13.3	20	86	0
Vinyl chloride	1.971	1.674	-	15.1	20	79	0
Bromomethane	10	8.112	-	18.9	20	80	0
Chloroethane	1.198	1.11	-	7.3	20	88	0
Trichlorofluoromethane	2.788	2.625	-	5.8	20	89	0
Ethyl ether	0.889	0.907	-	-2	20	103	0
1,1-Dichloroethene	1.608	1.489	-	7.4	20	90	0
Carbon disulfide	4.761	4.355	-	8.5	20	88	0
Methylene chloride	1.728	1.668	-	3.5	20	95	0
Acetone	0.545	0.619	-	-13.6	20	115	0
trans-1,2-Dichloroethene	1.648	1.559	-	5.4	20	93	0
Methyl tert-butyl ether	4.021	4.418	-	-9.9	20	117	0
Diisopropyl ether	6.261	6.237	-	0.4	20	105	0
1,1-Dichloroethane	3.488	3.165	-	9.3	20	88	0
Ethyl tert-butyl ether	4.857	5.074	-	-4.5	20	109	0
cis-1,2-Dichloroethene	1.889	1.784	-	5.6	20	93	-.01
2,2-Dichloropropane	2.736	2.565	-	6.3	20	96	0
Bromochloromethane	0.897	0.863	-	3.8	20	94	0
Chloroform	3.289	3.022	-	8.1	20	88	0
Carbon tetrachloride	2.644	2.403	-	9.1	20	90	0
Tetrahydrofuran	0.539	0.62	-	-15	20	115	0
Dibromofluoromethane	0.29	0.274	-	5.5	20	105	0
1,1,1-Trichloroethane	2.893	2.672	-	7.6	20	91	0
2-Butanone	0.765	0.927	-	-21.2*	20	123	0
1,1-Dichloropropene	2.301	2.257	-	1.9	20	97	0
Benzene	6.631	6.319	-	4.7	20	96	0
tert-Amyl methyl ether	3.944	4.051	-	-2.7	20	111	0
1,2-Dichloroethane-d4	0.391	0.353	-	9.7	20	101	0
1,2-Dichloroethane	2.572	2.464	-	4.2	20	97	0
Trichloroethene	1.748	1.706	-	2.4	20	96	0
Dibromomethane	1.104	1.068	-	3.3	20	100	0
1,2-Dichloropropane	1.79	1.717	-	4.1	20	99	0
Bromodichloromethane	2.457	2.302	-	6.3	20	94	0
1,4-Dioxane	0.012	0.018*	-	-50*	20	158	0
cis-1,3-Dichloropropene	2.784	2.767	-	0.6	20	101	0
Chlorobenzene-d5	1	1	-	0	20	99	0
Toluene-d8	1.15	1.183	-	-2.9	20	101	0
Toluene	4.965	4.782	-	3.7	20	91	0
4-Methyl-2-pentanone	0.596	0.652	-	-9.4	20	115	0
Tetrachloroethene	2.321	2.378	-	-2.5	20	98	0
trans-1,3-Dichloropropene	10	10.411	-	-4.1	20	104	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2118722	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/26/21 02:17	
Lab File ID	: J210426A01	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1490642-2	Init. Calib. Times	: 06:07	12:57
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	1.356	1.485	-	-9.5	20	107	0
Chlorodibromomethane	1.961	2.099	-	-7	20	105	0
1,3-Dichloropropane	2.782	3.045	-	-9.5	20	106	0
1,2-Dibromoethane	1.63	1.815	-	-11.3	20	108	0
2-Hexanone	1.263	1.424	-	-12.7	20	111	0
Chlorobenzene	5.757	5.688	-	1.2	20	95	0
Ethylbenzene	9.387	9.582	-	-2.1	20	90	0
1,1,1,2-Tetrachloroethane	1.992	2.061	-	-3.5	20	104	0
p/m Xylene	3.789	3.875	-	-2.3	20	89	0
o Xylene	3.595	3.669	-	-2.1	20	91	0
Styrene	20	19.805	-	1	20	90	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	101	0
Bromoform	2.359	2.425	-	-2.8	20	114	0
Isopropylbenzene	17.473	15.868	-	9.2	20	89	0
4-Bromofluorobenzene	0.8	0.768	-	4	20	100	0
Bromobenzene	4.366	4.073	-	6.7	20	97	0
n-Propylbenzene	21.642	19.867	-	8.2	20	87	0
1,1,2,2-Tetrachloroethane	3.387	3.456	-	-2	20	105	0
2-Chlorotoluene	14.23	13.262	-	6.8	20	88	0
1,3,5-Trimethylbenzene	14.552	13.594	-	6.6	20	91	0
1,2,3-Trichloropropane	3.058	3.036	-	0.7	20	104	0
4-Chlorotoluene	13.04	12.082	-	7.3	20	91	0
tert-Butylbenzene	12.872	12.237	-	4.9	20	91	0
1,2,4-Trimethylbenzene	13.954	13.303	-	4.7	20	94	0
sec-Butylbenzene	17.612	16.669	-	5.4	20	90	0
p-Isopropyltoluene	10	9.158	-	8.4	20	92	0
1,3-Dichlorobenzene	8.882	8.453	-	4.8	20	94	0
1,4-Dichlorobenzene	8.812	8.335	-	5.4	20	94	0
n-Butylbenzene	14.08	13.908	-	1.2	20	94	0
1,2-Dichlorobenzene	8.245	7.817	-	5.2	20	96	0
1,2-Dibromo-3-chloropropan	0.605	0.681	-	-12.6	20	115	0
Hexachlorobutadiene	2.239	2.386	-	-6.6	20	106	0
1,2,4-Trichlorobenzene	4.502	4.638	-	-3	20	111	0
Naphthalene	10.045	10.296	-	-2.5	20	113	0
1,2,3-Trichlorobenzene	4.247	4.351	-	-2.4	20	110	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L2119025
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	3252H
Report Date:	05/25/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2119025-01	MW-SD13-04132021	WATER	CONCORD, MA	04/13/21 16:00	04/14/21
L2119025-02	MW-BS03-04132021	WATER	CONCORD, MA	04/13/21 15:55	04/14/21
L2119025-03	TRIP BLANK1-04142021	WATER	CONCORD, MA	04/13/21 00:00	04/14/21
L2119025-04	HA20-CMT-512-04142021	WATER	CONCORD, MA	04/14/21 08:50	04/14/21
L2119025-05	MW-SD30-04142021	WATER	CONCORD, MA	04/14/21 09:05	04/14/21
L2119025-06	MW-SD06-04142021	WATER	CONCORD, MA	04/14/21 09:10	04/14/21
L2119025-07	MW-SM13-04142021	WATER	CONCORD, MA	04/14/21 09:50	04/14/21
L2119025-08	MW-S11-04142021	WATER	CONCORD, MA	04/14/21 10:20	04/14/21
L2119025-09	MW-SD27-04142021	WATER	CONCORD, MA	04/14/21 11:15	04/14/21
L2119025-10	HB-10S-04142021	WATER	CONCORD, MA	04/14/21 11:30	04/14/21
L2119025-11	HA20-CMT-6S-04142021	WATER	CONCORD, MA	04/14/21 11:20	04/14/21
L2119025-12	BEW-3-04142021	WATER	CONCORD, MA	04/14/21 10:30	04/14/21
L2119025-13	EQ BLANK1-04142021	WATER	CONCORD, MA	04/14/21 13:00	04/14/21
L2119025-14	P-1-04142021	WATER	CONCORD, MA	04/14/21 09:15	04/14/21
L2119025-15	P-2-04142021	WATER	CONCORD, MA	04/14/21 11:10	04/14/21
L2119025-16	P-3-04142021	WATER	CONCORD, MA	04/14/21 12:45	04/14/21
L2119025-17	PW-6-04142021	WATER	CONCORD, MA	04/14/21 13:30	04/14/21
L2119025-18	MW-S27-04142021	WATER	CONCORD, MA	04/14/21 13:55	04/14/21
L2119025-19	FIELD BLANK1-04142021	WATER	CONCORD, MA	04/14/21 14:00	04/14/21
L2119025-20	HBPZ-2R-04142021	WATER	CONCORD, MA	04/14/21 14:30	04/14/21
L2119025-21	HA20-CMT-6I-04142021	WATER	CONCORD, MA	04/14/21 14:05	04/14/21
L2119025-22	MW-S01-04142021	WATER	CONCORD, MA	04/14/21 13:40	04/14/21
L2119025-23	MW-S01-04142021 DUP	WATER	CONCORD, MA	04/14/21 13:45	04/14/21
L2119025-24	HB-10-04142021	WATER	CONCORD, MA	04/14/21 16:05	04/14/21

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Revision

May 25, 2021: This report includes the results of the Bromide analysis performed on L2119025-01, -02, -07, -11, -12, -13, -20, -21, -22, and -23.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Sample Receipt

L2119025-02 and -12: Headspace was noted in all sample containers submitted for Volatile Organics. The analysis was cancelled at the client's request.

Volatile Organics

L2119025-05, -06, -10, -18, -23, and -24: Initial calibration utilized a quadratic fit for: n-butylbenzene, p-isopropyltoluene

In reference to question H:

L2119025-20: The surrogate recovery is above the acceptance criteria for dibromofluoromethane (131%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L2119025-21: The surrogate recovery is outside the acceptance criteria for dibromofluoromethane (133%); however, the sample was not re-analyzed due to coelution with an obvious interference. A copy of the chromatogram is included as an attachment to this report.

The WG1487778-3 LCS recovery, associated with L2119025-03, is above the individual acceptance criteria for acetone (140%), but within the overall method allowances. The results of the associated sample are reported; however, all positive detects are considered to have a potentially high bias for this compound.

The WG1490642-3/-4 LCS/LCSD recoveries, associated with L2119025-01, are above the individual acceptance criteria for 1,4-dioxane (152%/144%), but within the overall method allowances. The results of the

Case Narrative (continued)

associated sample are reported; however, all positive detects are considered to have a potentially high bias for this compound.

The WG1491082-4 LCSD recoveries, associated with L2119025-23 and -24, are above the individual acceptance criteria for 1,3,5-trimethylbenzene (140%) and 1,2,4-trimethylbenzene (140%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for these compounds.

The WG1491117-4 LCSD recovery, associated with L2119025-14 through -17, -20, -21, and -22, is above the individual acceptance criteria for 1,4-dioxane (146%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for this compound. The LCS/LCSD RPD is above the acceptance criteria for 1,4-dioxane (39%).

The WG1491733-3 LCS recovery, associated with L2119025-05, -06, -10, and -18, is above the individual acceptance criteria for 1,2,4-trimethylbenzene (140%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for this compound.

L2119025-01, -14 through -17, -20, -21, and -22: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0098)

Average Response Factor: 1,4-dioxane

L2119025-03: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0095)

Average Response Factor: 1,4-dioxane

L2119025-04, -07, -08, -09, -11, and -13: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0157)

Average Response Factor: 1,4-dioxane

L2119025-05, -06, -10, -18, -23, and -24: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0025)

Average Response Factor: 1,4-dioxane

L2119025-01, -03 through -11, -13 through -18, and -20 through -24: The associated continuing calibration

Case Narrative (continued)

standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

Semivolatile Organics

L2119025-01, -02, -04 through -18, WG1487590-1, WG1488186-1, WG1487590-2/-3, WG1488186-2, WG1488186-3, WG1488186-4, and WG1488186-5: The initial calibration utilized a quadratic fit for butyl benzyl phthalate, bis(2-ethylhexyl)phthalate, and di-n-octylphthalate.

L2119025-20 through -24, WG1488687-1, WG1488687-2, and WG1488687-3: The initial calibration utilized a quadratic fit for 2,4,6-tribromophenol and bis(2-ethylhexyl)phthalate.

In reference to question H:

L2119025-04: The surrogate recoveries are outside the individual acceptance criteria for 2,4,6-tribromophenol (147%) and 4-terphenyl-d14 (144%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

L2119025-09: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (115%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1487590-2/-3 LCS/LCSD recoveries, associated with L2119025-01 and -02, are below the acceptance criteria for aniline (29%/30%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1487590-2/-3 LCS/LCSD RPD, associated with L2119025-01 and -02, is above the acceptance criteria for benzo(k)fluoranthene (23%).

The surrogate recovery for the WG1487590-2 LCS, associated with L2119025-01 and -02, is outside the individual acceptance criteria for 2,4,6-tribromophenol (126%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Case Narrative (continued)

The WG1488186-2/-3 LCS/LCSD recoveries, associated with L2119025-04 through -18, are below the acceptance criteria for aniline (34%/29%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The surrogate recoveries for the WG1488186-2/-3 LCS/LCSD, associated with L2119025-04 through -18, are outside the acceptance criteria for 2,4,6-tribromophenol (128%/135%). The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1488687-2/-3 LCS/LCSD recoveries, associated with L2119025-20 through -24, are below the acceptance criteria for aniline (25%/24%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1488186-4 MS recovery, performed on L2119025-12, is outside the acceptance criteria for aniline (33%).

The WG1488186-4 MS recovery, performed on L2119025-12, is outside the acceptance criteria for phenol (0%). The unacceptable percent recovery is attributed to the elevated concentrations of target compounds present in the native sample.

The WG1488186-5 MSD recovery, performed on L2119025-12, is outside the acceptance criteria for 2,4-dinitrophenol (140%).

The WG1488186-4/-5 MS/MSD RPDs, performed on L2119025-12, are outside the acceptance criteria for 1,2,4-trichlorobenzene (26%), bis(2-chloroethyl)ether (23%), 1,3-dichlorobenzene (22%), 1,4-dichlorobenzene (23%), 2,4-dinitrotoluene (27%), 2,6-dinitrotoluene (25%), azobenzene (29%), 4-bromophenyl phenyl ether (22%), bis(2-chloroisopropyl)ether (24%), bis(2-chloroethoxy)methane (22%), isophorone (24%), nitrobenzene (27%), bis(2-ethylhexyl)phthalate (29%), butyl benzyl phthalate (32%), di-n-butylphthalate (31%), di-n-octylphthalate (27%), diethyl phthalate (31%), dimethyl phthalate (29%), aniline (36%), dibenzofuran (24%), acetophenone (26%), 2-chlorophenol (24%), 2,4-dichlorophenol (21%), 2,4-dimethylphenol (33%), 2-nitrophenol (29%), 4-nitrophenol (31%), 2,4-dinitrophenol (22%), phenol (26%), 2-methylphenol (35%), and 3-methylphenol/4-methylphenol (31%).

Case Narrative (continued)

The surrogate recovery for the WG1488186-5 MSD, performed on L2119025-12, is outside the acceptance criteria for 2,4,6-tribromophenol (136%). The associated MSD spike compounds are within overall method allowances; therefore, no further action was taken.

Semivolatile Organics by SIM
L2119025-01, -02, -04 through -18, -20 through -24, WG1487591-1, WG1488688-1, WG1488688-2/-3, WG1488187-4, and WG1488187-5: The initial calibration utilized a quadratic fit for pentachlorophenol
In reference to question H:
L2119025-10: The surrogate recovery is outside the individual acceptance criteria for nitrobenzene-d5 (131%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
L2119025-21: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (115%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
WG1488688-1: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (113%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The WG1487591-2/-3 LCS/LCSD RPDs, associated with L2119025-01 and -02, are above the acceptance criteria for 2-chloronaphthalene (26%), acenaphthylene (24%), and benzo(ghi)perylene (22%).
The surrogate recoveries for the WG1488187-2/-3 LCS/LCSD, associated with L2119025-04 through -18, are outside the acceptance criteria for 2,4,6-tribromophenol (141%/123%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.
The WG1488688-2/-3 LCS/LCSD RPD, associated with L2119025-20 through -24, is above the acceptance criteria for naphthalene (21%).
The surrogate recovery for the WG1488187-4 MS, performed on L2119025-12, is outside the acceptance criteria for 2,4,6-tribromophenol (111%). The associated MS spike compounds are within overall method

Case Narrative (continued)

allowances; therefore, no further action was taken.

Non-MCP Related Narratives

Perfluorinated Alkyl Acids by Isotope Dilution

L2119025-02, -13, -18, -19, and -24: The MeOH fraction of the extraction is reported for the following compounds: Perfluorooctanesulfonamide (FOSA), N-Methyl Perfluorooctane Sulfonamide (NMeFOSA), N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA), N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE), and N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).

L2119025-18: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

Dissolved Organic Carbon

The samples were field filtered; a filter blank was not received.

Anions by Ion Chromatography

The WG1490523-3/-4 MS/MSD recoveries, performed on L2119025-12, are outside the acceptance criteria for chloride (88%/81%) and sulfate (79%/81%); however, the associated LCS recoveries are within criteria. No further action was taken.

WG1503283: MS/MSD for Bromide was not performed on L2119025-12 due to a laboratory oversight (Bromide was not originally requested).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 05/25/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	HBPZ-2R-04142021	L2119025-20	Dibromofluoromethane	Surrogate	131	70-130	-	potential high bias
8260C	HA20-CMT-6I-04142021	L2119025-21	Dibromofluoromethane	Surrogate	133	70-130	-	potential high bias
8260C	Batch QC	WG1487778-3	Acetone	LCS	140	70-130	03	potential high bias
8260C	Batch QC	WG1490642-3	1,4-Dioxane	LCS	152	70-130	01	potential high bias
8260C	Batch QC	WG1490642-4	1,4-Dioxane	LCSD	144	70-130	01	potential high bias
8260C	Batch QC	WG1491082-4	1,3,5-Trimethylbenzene	LCSD	140	70-130	23-24	potential high bias
8260C	Batch QC	WG1491082-4	1,2,4-Trimethylbenzene	LCSD	140	70-130	23-24	potential high bias
8260C	Batch QC	WG1491117-4	1,4-Dioxane	LCSD	39	20	14-17,20-22	non-directional bias
8260C	Batch QC	WG1491117-4	1,4-Dioxane	LCSD	146	70-130	14-17,20-22	potential high bias
8260C	Batch QC	WG1491733-3	1,2,4-Trimethylbenzene	LCS	140	70-130	05-06,10,18	potential high bias
MCP Semivolatile Organics - Westborough Lab								
8270D	HA20-CMT-512-04142021	L2119025-04	2,4,6-Tribromophenol	Surrogate	147	15-110	-	potential high bias
8270D	HA20-CMT-512-04142021	L2119025-04	4-Terphenyl-d14	Surrogate	144	30-130	-	potential high bias
8270D	MW-SD27-04142021	L2119025-09	2,4,6-Tribromophenol	Surrogate	115	15-110	-	potential high bias
8270D	Batch QC	WG1487590-2	Aniline	LCS	29	40-140	01-02	potential low bias
8270D	Batch QC	WG1487590-2	2,4,6-Tribromophenol	Surrogate	126	15-110	-	potential high bias
8270D	Batch QC	WG1487590-3	Benzo(k)fluoranthene	LCSD	23	20	01-02	non-directional bias
8270D	Batch QC	WG1487590-3	Aniline	LCSD	30	40-140	01-02	potential low bias
8270D	Batch QC	WG1488186-2	Aniline	LCS	34	40-140	04-18	potential low bias
8270D	Batch QC	WG1488186-2	2,4,6-Tribromophenol	Surrogate	128	15-110	-	potential high bias
8270D	Batch QC	WG1488186-3	Aniline	LCSD	29	40-140	04-18	potential low bias
8270D	Batch QC	WG1488186-3	2,4,6-Tribromophenol	Surrogate	135	15-110	-	potential high bias
8270D	Batch QC (L2119025-12)	WG1488186-4	Aniline	MS	33	40-140	04-18	potential low bias
8270D	Batch QC (L2119025-12)	WG1488186-4	Phenol	MS	0	30-130	04-18	potential low bias
8270D	Batch QC (L2119025-12)	WG1488186-5	1,2,4-Trichlorobenzene	MSD	26	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Bis(2-chloroethyl)ether	MSD	23	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	1,3-Dichlorobenzene	MSD	22	20	04-18	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC (L2119025-12)	WG1488186-5	1,4-Dichlorobenzene	MSD	23	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2,4-Dinitrotoluene	MSD	27	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2,6-Dinitrotoluene	MSD	25	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Azobenzene	MSD	29	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	4-Bromophenyl phenyl ether	MSD	22	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Bis(2-chloroisopropyl)ether	MSD	24	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Bis(2-chloroethoxy)methane	MSD	22	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Isophorone	MSD	24	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Nitrobenzene	MSD	27	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Bis(2-ethylhexyl)phthalate	MSD	29	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Butyl benzyl phthalate	MSD	32	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Di-n-butylphthalate	MSD	31	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Di-n-octylphthalate	MSD	27	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Diethyl phthalate	MSD	31	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Dimethyl phthalate	MSD	29	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Aniline	MSD	36	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Dibenzofuran	MSD	24	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Acetophenone	MSD	26	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2-Chlorophenol	MSD	24	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2,4-Dichlorophenol	MSD	21	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2,4-Dimethylphenol	MSD	33	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2-Nitrophenol	MSD	29	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	4-Nitrophenol	MSD	31	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2,4-Dinitrophenol	MSD	22	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2,4-Dinitrophenol	MSD	140	30-130	04-18	potential high bias
8270D	Batch QC (L2119025-12)	WG1488186-5	Phenol	MSD	26	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2-Methylphenol	MSD	35	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	3-Methylphenol/4-Methylphenol	MSD	31	20	04-18	non-directional bias
8270D	Batch QC (L2119025-12)	WG1488186-5	2,4,6-Tribromophenol	Surrogate	136	15-110	-	potential high bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119025

Report Date: 05/25/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC	WG1488687-2	Aniline	LCS	25	40-140	20-24	potential low bias
8270D	Batch QC	WG1488687-3	Aniline	LCSD	24	40-140	20-24	potential low bias
MCP Semivolatile Organics by SIM - Westborough Lab								
8270D-SIM	HB-10S-04142021	L2119025-10	Nitrobenzene-d5	Surrogate	131	30-130	-	potential high bias
8270D-SIM	HA20-CMT-6I-04142021	L2119025-21	2,4,6-Tribromophenol	Surrogate	115	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1487591-3	2-Chloronaphthalene	LCSD	26	20	01-02	non-directional bias
8270D-SIM	Batch QC	WG1487591-3	Acenaphthylene	LCSD	24	20	01-02	non-directional bias
8270D-SIM	Batch QC	WG1487591-3	Benzo(ghi)perylene	LCSD	22	20	01-02	non-directional bias
8270D-SIM	Batch QC	WG1488187-2	2,4,6-Tribromophenol	Surrogate	141	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1488187-3	2,4,6-Tribromophenol	Surrogate	123	15-110	-	potential high bias
8270D-SIM	Batch QC (L2119025-12)	WG1488187-4	2,4,6-Tribromophenol	Surrogate	111	15-110	-	potential high bias
8270D-SIM	Laboratory Method Bl	WG1488688-1	2,4,6-Tribromophenol	Surrogate	113	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1488688-3	Naphthalene	LCSD	21	20	20-24	non-directional bias
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2119025-12)	WG1490523-3	Chloride	MS	88	90-110	01-02,07,11-13,20-21,23	potential low bias
300.0	Batch QC (L2119025-12)	WG1490523-3	Sulfate	MS	79	90-110	01-02,07,11-13,20-21,23	potential low bias
300.0	Batch QC (L2119025-12)	WG1490523-4	Chloride	MSD	81	90-110	01-02,07,11-13,20-21,23	potential low bias
300.0	Batch QC (L2119025-12)	WG1490523-4	Sulfate	MSD	81	90-110	01-02,07,11-13,20-21,23	potential low bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-01
Client ID: MW-SD13-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 16:00
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/21 10:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.65	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-01	Date Collected:	04/13/21 16:00
Client ID:	MW-SD13-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-01	Date Collected:	04/13/21 16:00
Client ID:	MW-SD13-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	118		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-03	Date Collected:	04/13/21 00:00
Client ID:	TRIP BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 08:47
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-03
Client ID: TRIP BLANK1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 00:00
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-03	Date Collected:	04/13/21 00:00
Client ID:	TRIP BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	126		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	129		70-130

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-04
Client ID: HA20-CMT-512-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 08:50
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 10:11
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.2		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-04 | Date Collected: 04/14/21 08:50
Client ID: HA20-CMT-512-04142021 | Date Received: 04/14/21
Sample Location: CONCORD, MA | Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-04	Date Collected:	04/14/21 08:50
Client ID:	HA20-CMT-512-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	127		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-05	Date Collected:	04/14/21 09:05
Client ID:	MW-SD30-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 06:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	2.0		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-05
Client ID: MW-SD30-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 09:05
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-05 Date Collected: 04/14/21 09:05
Client ID: MW-SD30-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	101		70-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-06
Client ID: MW-SD06-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 09:10
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 07:07
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.41	J	ug/l	1.0	0.21	1
Chloroform	0.56	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.94	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.21	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-06 Date Collected: 04/14/21 09:10
Client ID: MW-SD06-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.1		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.21	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.21	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-06	Date Collected:	04/14/21 09:10
Client ID:	MW-SD06-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	101		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-07
Client ID: MW-SM13-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 09:50
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 12:14
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-07 Date Collected: 04/14/21 09:50
Client ID: MW-SM13-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-07	Date Collected:	04/14/21 09:50
Client ID:	MW-SM13-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	125		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	123		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-08
Client ID: MW-S11-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 10:20
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 12:55
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-08 Date Collected: 04/14/21 10:20
Client ID: MW-S11-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-08	Date Collected:	04/14/21 10:20
Client ID:	MW-S11-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	127		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-09	Date Collected:	04/14/21 11:15
Client ID:	MW-SD27-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Matrix:	Water
Analytical Method:	97,8260C
Analytical Date:	04/27/21 13:36
Analyst:	KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.9		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	1.2		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-09	Date Collected:	04/14/21 11:15
Client ID:	MW-SD27-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-09 Date Collected: 04/14/21 11:15

Client ID: MW-SD27-04142021 Date Received: 04/14/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	126		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-10
Client ID: HB-10S-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 11:30
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 07:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	27		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	0.10	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-10	Date Collected:	04/14/21 11:30
Client ID:	HB-10S-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	6.1		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.1		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.1		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-10	Date Collected:	04/14/21 11:30
Client ID:	HB-10S-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	101		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-11	Date Collected:	04/14/21 11:20
Client ID:	HA20-CMT-6S-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 14:58
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.28	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.18	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-11
Date Collected: 04/14/21 11:20
Client ID: HA20-CMT-6S-04142021
Date Received: 04/14/21
Sample Location: CONCORD, MA
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-11	Date Collected:	04/14/21 11:20
Client ID:	HA20-CMT-6S-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	127		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-13	Date Collected:	04/14/21 13:00
Client ID:	EQ BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 15:39
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-13 Date Collected: 04/14/21 13:00

Client ID: EQ BLANK1-04142021 Date Received: 04/14/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-13	Date Collected:	04/14/21 13:00
Client ID:	EQ BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	122		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-14	Date Collected:	04/14/21 09:15
Client ID:	P-1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 08:28
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.57	J	ug/l	1.0	0.21	1
Chloroform	0.42	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	3.0		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-14
Client ID: P-1-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 09:15
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.2		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.51	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.51	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-14	Date Collected:	04/14/21 09:15
Client ID:	P-1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	129		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-15
Client ID: P-2-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 11:10
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 09:09
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.80	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	5.3		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-15 Date Collected: 04/14/21 11:10

Client ID: P-2-04142021 Date Received: 04/14/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.53	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-15	Date Collected:	04/14/21 11:10
Client ID:	P-2-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	129		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-16	Date Collected:	04/14/21 12:45
Client ID:	P-3-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 09:50
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.57	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	3.4		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-16 | Date Collected: 04/14/21 12:45
Client ID: P-3-04142021 | Date Received: 04/14/21
Sample Location: CONCORD, MA | Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.40	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-16	Date Collected:	04/14/21 12:45
Client ID:	P-3-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	118		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-17
Client ID: PW-6-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 13:30
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 10:31
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	1.2		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-17	Date Collected:	04/14/21 13:30
Client ID:	PW-6-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	1.5	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-17	Date Collected:	04/14/21 13:30
Client ID:	PW-6-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	127		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-18
Client ID: MW-S27-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:55
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 08:07
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.98	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	1.6		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-18 Date Collected: 04/14/21 13:55
Client ID: MW-S27-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.22	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-18
Client ID: MW-S27-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 13:55
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	100		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-20
Client ID: HBPZ-2R-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 14:30
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 11:54
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.63	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-20	Date Collected:	04/14/21 14:30
Client ID:	HBPZ-2R-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.25	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-20	Date Collected:	04/14/21 14:30
Client ID:	HBPZ-2R-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	**131**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-21	Date Collected:	04/14/21 14:05
Client ID:	HA20-CMT-6I-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 12:35
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.30	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-21	Date Collected:	04/14/21 14:05
Client ID:	HA20-CMT-6I-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-21	Date Collected:	04/14/21 14:05
Client ID:	HA20-CMT-6I-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	126		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	**133**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-22	Date Collected:	04/14/21 13:40
Client ID:	MW-S01-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 13:16
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	1.6		ug/l	1.0	0.21	1
Chloroform	0.33	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.18	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	0.48	J	ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.45	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-22
Client ID: MW-S01-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:40
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.7		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.25	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.25	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-22	Date Collected:	04/14/21 13:40
Client ID:	MW-S01-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	127		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-23
Client ID: MW-S01-04142021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:45
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 11:29
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	1.0		ug/l	1.0	0.21	1
Chloroform	0.22	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.25	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	0.32	J	ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.29	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-23	Date Collected:	04/14/21 13:45
Client ID:	MW-S01-04142021 DUP	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.4		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.22	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.22	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-23
Client ID: MW-S01-04142021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:45
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	104		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-24 Date Collected: 04/14/21 16:05
Client ID: HB-10-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 10:59
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	53		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-24 Date Collected: 04/14/21 16:05

Client ID: HB-10-04142021 Date Received: 04/14/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.4		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.49	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.49	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119025

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-24	Date Collected:	04/14/21 16:05
Client ID:	HB-10-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	102		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03 Batch: WG1487778-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03 Batch: WG1487778-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:39
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03 Batch: WG1487778-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	119		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/26/21 03:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1490642-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/26/21 03:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1490642-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/26/21 03:41
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1490642-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	110		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 04:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 23-24 Batch: WG1491082-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 04:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 23-24 Batch: WG1491082-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 04:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 23-24 Batch: WG1491082-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	100		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 06:04
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 04,07-09,11,13 Batch: WG1491093-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 06:04
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 04,07-09,11,13 Batch: WG1491093-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 06:04
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 04,07-09,11,13 Batch: WG1491093-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	114		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 06:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 14-17,20-22 Batch: WG1491117-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 06:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 14-17,20-22 Batch: WG1491117-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 06:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 14-17,20-22 Batch: WG1491117-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	113		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/28/21 05:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05-06,10,18 Batch: WG1491733-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/28/21 05:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05-06,10,18 Batch: WG1491733-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/28/21 05:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05-06,10,18 Batch: WG1491733-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG1487778-3 WG1487778-4								
Methylene chloride	120		120		70-130	0		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	110		100		70-130	10		20
1,1,2-Trichloroethane	120		110		70-130	9		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	110		100		70-130	10		20
Trichlorofluoromethane	110		110		70-130	0		20
1,2-Dichloroethane	120		120		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	120		110		70-130	9		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	92		94		70-130	2		20
1,1,2,2-Tetrachloroethane	110		110		70-130	0		20
Benzene	110		110		70-130	0		20
Toluene	110		100		70-130	10		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	130		120		70-130	8		20
Bromomethane	96		94		70-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG1487778-3 WG1487778-4								
Vinyl chloride	110		110		70-130	0		20
Chloroethane	120		110		70-130	9		20
1,1-Dichloroethene	110		110		70-130	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	100		110		70-130	10		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	110		110		70-130	0		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	110		110		70-130	0		20
Styrene	115		110		70-130	4		20
Dichlorodifluoromethane	110		110		70-130	0		20
Acetone	**140**	Q	130		70-130	7		20
Carbon disulfide	120		110		70-130	9		20
Methyl ethyl ketone	120		120		70-130	0		20
Methyl isobutyl ketone	100		100		70-130	0		20
2-Hexanone	110		120		70-130	9		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	130		130		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG1487778-3 WG1487778-4								
2,2-Dichloropropane	110		120		70-130	9		20
1,2-Dibromoethane	110		100		70-130	10		20
1,3-Dichloropropane	120		110		70-130	9		20
1,1,1,2-Tetrachloroethane	110		100		70-130	10		20
Bromobenzene	97		98		70-130	1		20
n-Butylbenzene	110		110		70-130	0		20
sec-Butylbenzene	100		110		70-130	10		20
tert-Butylbenzene	98		100		70-130	2		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	100		110		70-130	10		20
1,2-Dibromo-3-chloropropane	98		100		70-130	2		20
Hexachlorobutadiene	110		110		70-130	0		20
Isopropylbenzene	95		100		70-130	5		20
p-Isopropyltoluene	100		110		70-130	10		20
Naphthalene	96		96		70-130	0		20
n-Propylbenzene	100		110		70-130	10		20
1,2,3-Trichlorobenzene	100		99		70-130	1		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	100		110		70-130	10		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Diethyl ether	110		110		70-130	0		20
Diisopropyl Ether	120		120		70-130	0		20
Ethyl-Tert-Butyl-Ether	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG1487778-3 WG1487778-4								
Tertiary-Amyl Methyl Ether	95		100		70-130	5		20
1,4-Dioxane	112		96		70-130	15		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		106		70-130
Toluene-d8	102		100		70-130
4-Bromofluorobenzene	86		92		70-130
Dibromofluoromethane	102		99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1490642-3 WG1490642-4								
Methylene chloride	96		110		70-130	14		20
1,1-Dichloroethane	91		100		70-130	9		20
Chloroform	92		110		70-130	18		20
Carbon tetrachloride	91		100		70-130	9		20
1,2-Dichloropropane	96		100		70-130	4		20
Dibromochloromethane	110		100		70-130	10		20
1,1,2-Trichloroethane	110		100		70-130	10		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	99		100		70-130	1		20
Trichlorofluoromethane	94		100		70-130	6		20
1,2-Dichloroethane	96		100		70-130	4		20
1,1,1-Trichloroethane	92		100		70-130	8		20
Bromodichloromethane	94		100		70-130	6		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	99		110		70-130	11		20
1,1-Dichloropropene	98		100		70-130	2		20
Bromoform	100		110		70-130	10		20
1,1,2,2-Tetrachloroethane	100		110		70-130	10		20
Benzene	95		100		70-130	5		20
Toluene	96		100		70-130	4		20
Ethylbenzene	100		110		70-130	10		20
Chloromethane	87		93		70-130	7		20
Bromomethane	81		92		70-130	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1490642-3 WG1490642-4								
Vinyl chloride	85		95		70-130	11		20
Chloroethane	93		85		70-130	9		20
1,1-Dichloroethene	92		100		70-130	8		20
trans-1,2-Dichloroethene	95		110		70-130	15		20
Trichloroethene	98		110		70-130	12		20
1,2-Dichlorobenzene	95		110		70-130	15		20
1,3-Dichlorobenzene	95		110		70-130	15		20
1,4-Dichlorobenzene	94		110		70-130	16		20
Methyl tert butyl ether	110		120		70-130	9		20
p/m-Xylene	100		110		70-130	10		20
o-Xylene	100		110		70-130	10		20
cis-1,2-Dichloroethene	94		100		70-130	6		20
Dibromomethane	97		100		70-130	3		20
1,2,3-Trichloropropane	99		110		70-130	11		20
Styrene	100		105		70-130	5		20
Dichlorodifluoromethane	84		91		70-130	8		20
Acetone	110		120		70-130	9		20
Carbon disulfide	91		100		70-130	9		20
Methyl ethyl ketone	120		120		70-130	0		20
Methyl isobutyl ketone	110		110		70-130	0		20
2-Hexanone	110		120		70-130	9		20
Bromochloromethane	96		110		70-130	14		20
Tetrahydrofuran	120		130		70-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1490642-3 WG1490642-4								
2,2-Dichloropropane	94		100		70-130	6		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		110		70-130	10		20
Bromobenzene	93		110		70-130	17		20
n-Butylbenzene	99		110		70-130	11		20
sec-Butylbenzene	95		110		70-130	15		20
tert-Butylbenzene	95		110		70-130	15		20
o-Chlorotoluene	93		110		70-130	17		20
p-Chlorotoluene	93		110		70-130	17		20
1,2-Dibromo-3-chloropropane	110		120		70-130	9		20
Hexachlorobutadiene	110		120		70-130	9		20
Isopropylbenzene	91		110		70-130	19		20
p-Isopropyltoluene	92		100		70-130	8		20
Naphthalene	100		110		70-130	10		20
n-Propylbenzene	92		110		70-130	18		20
1,2,3-Trichlorobenzene	100		110		70-130	10		20
1,2,4-Trichlorobenzene	100		110		70-130	10		20
1,3,5-Trimethylbenzene	93		110		70-130	17		20
1,2,4-Trimethylbenzene	95		110		70-130	15		20
Diethyl ether	100		120		70-130	18		20
Diisopropyl Ether	100		110		70-130	10		20
Ethyl-Tert-Butyl-Ether	100		110		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1490642-3 WG1490642-4								
Tertiary-Amyl Methyl Ether	100		110		70-130	10		20
1,4-Dioxane	**152**	Q	**144**	Q	70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	90		88		70-130
Toluene-d8	103		102		70-130
4-Bromofluorobenzene	96		105		70-130
Dibromofluoromethane	94		99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 23-24 Batch: WG1491082-3 WG1491082-4								
Methylene chloride	100		110		70-130	10		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	100		110		70-130	10		20
1,2-Dichloropropane	110		120		70-130	9		20
Dibromochloromethane	100		110		70-130	10		20
1,1,2-Trichloroethane	110		120		70-130	9		20
Tetrachloroethene	94		100		70-130	6		20
Chlorobenzene	99		110		70-130	11		20
Trichlorofluoromethane	100		110		70-130	10		20
1,2-Dichloroethane	120		130		70-130	8		20
1,1,1-Trichloroethane	100		110		70-130	10		20
Bromodichloromethane	110		120		70-130	9		20
trans-1,3-Dichloropropene	110		120		70-130	9		20
cis-1,3-Dichloropropene	110		120		70-130	9		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	90		95		70-130	5		20
1,1,2,2-Tetrachloroethane	96		100		70-130	4		20
Benzene	100		110		70-130	10		20
Toluene	100		110		70-130	10		20
Ethylbenzene	110		120		70-130	9		20
Chloromethane	110		120		70-130	9		20
Bromomethane	92		95		70-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 23-24 Batch: WG1491082-3 WG1491082-4								
Vinyl chloride	110		120		70-130	9		20
Chloroethane	100		110		70-130	10		20
1,1-Dichloroethene	96		100		70-130	4		20
trans-1,2-Dichloroethene	98		110		70-130	12		20
Trichloroethene	96		100		70-130	4		20
1,2-Dichlorobenzene	99		100		70-130	1		20
1,3-Dichlorobenzene	98		100		70-130	2		20
1,4-Dichlorobenzene	100		110		70-130	10		20
Methyl tert butyl ether	110		120		70-130	9		20
p/m-Xylene	100		110		70-130	10		20
o-Xylene	100		110		70-130	10		20
cis-1,2-Dichloroethene	99		110		70-130	11		20
Dibromomethane	100		110		70-130	10		20
1,2,3-Trichloropropane	100		110		70-130	10		20
Styrene	100		110		70-130	10		20
Dichlorodifluoromethane	100		110		70-130	10		20
Acetone	120		130		70-130	8		20
Carbon disulfide	97		100		70-130	3		20
Methyl ethyl ketone	120		130		70-130	8		20
Methyl isobutyl ketone	100		110		70-130	10		20
2-Hexanone	100		120		70-130	18		20
Bromochloromethane	98		100		70-130	2		20
Tetrahydrofuran	120		130		70-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 23-24 Batch: WG1491082-3 WG1491082-4								
2,2-Dichloropropane	110		120		70-130	9		20
1,2-Dibromoethane	100		110		70-130	10		20
1,3-Dichloropropane	110		120		70-130	9		20
1,1,1,2-Tetrachloroethane	100		110		70-130	10		20
Bromobenzene	87		93		70-130	7		20
n-Butylbenzene	120		130		70-130	8		20
sec-Butylbenzene	100		110		70-130	10		20
tert-Butylbenzene	100		110		70-130	10		20
o-Chlorotoluene	100		110		70-130	10		20
p-Chlorotoluene	110		120		70-130	9		20
1,2-Dibromo-3-chloropropane	81		88		70-130	8		20
Hexachlorobutadiene	78		84		70-130	7		20
Isopropylbenzene	95		100		70-130	5		20
p-Isopropyltoluene	100		110		70-130	10		20
Naphthalene	100		110		70-130	10		20
n-Propylbenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	110		120		70-130	9		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,3,5-Trimethylbenzene	120		**140**	Q	70-130	15		20
1,2,4-Trimethylbenzene	130		**140**	Q	70-130	7		20
Diethyl ether	100		120		70-130	18		20
Diisopropyl Ether	120		130		70-130	8		20
Ethyl-Tert-Butyl-Ether	110		120		70-130	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119025

Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 23-24 Batch: WG1491082-3 WG1491082-4								
Tertiary-Amyl Methyl Ether	100		120		70-130	18		20
1,4-Dioxane	100		114		70-130	13		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	109		112		70-130
Toluene-d8	102		102		70-130
4-Bromofluorobenzene	94		94		70-130
Dibromofluoromethane	98		100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 04,07-09,11,13 Batch: WG1491093-3 WG1491093-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	130		120		70-130	8		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	110		110		70-130	0		20
Trichlorofluoromethane	120		110		70-130	9		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	120		110		70-130	9		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	100		110		70-130	10		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	120		110		70-130	9		20
Bromoform	100		110		70-130	10		20
1,1,2,2-Tetrachloroethane	110		120		70-130	9		20
Benzene	110		110		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	120		110		70-130	9		20
Chloromethane	120		110		70-130	9		20
Bromomethane	120		110		70-130	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 04,07-09,11,13 Batch: WG1491093-3 WG1491093-4								
Vinyl chloride	100		99		70-130	1		20
Chloroethane	110		110		70-130	0		20
1,1-Dichloroethene	120		110		70-130	9		20
trans-1,2-Dichloroethene	120		110		70-130	9		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	120		115		70-130	4		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	120		110		70-130	9		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	100		110		70-130	10		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	94		86		70-130	9		20
Acetone	100		110		70-130	10		20
Carbon disulfide	120		110		70-130	9		20
Methyl ethyl ketone	100		110		70-130	10		20
Methyl isobutyl ketone	88		100		70-130	13		20
2-Hexanone	84		100		70-130	17		20
Bromochloromethane	120		110		70-130	9		20
Tetrahydrofuran	100		110		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 04,07-09,11,13 Batch: WG1491093-3 WG1491093-4								
2,2-Dichloropropane	120		110		70-130	9		20
1,2-Dibromoethane	100		110		70-130	10		20
1,3-Dichloropropane	100		100		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	110		110		70-130	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	110		110		70-130	0		20
Hexachlorobutadiene	120		110		70-130	9		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	94		98		70-130	4		20
n-Propylbenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,3,5-Trimethylbenzene	110		110		70-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
Diethyl ether	100		100		70-130	0		20
Diisopropyl Ether	100		110		70-130	10		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 04,07-09,11,13 Batch: WG1491093-3 WG1491093-4								
Tertiary-Amyl Methyl Ether	94		97		70-130	3		20
1,4-Dioxane	108		104		70-130	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		94		70-130
Toluene-d8	96		101		70-130
4-Bromofluorobenzene	98		100		70-130
Dibromofluoromethane	107		95		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 14-17,20-22 Batch: WG1491117-3 WG1491117-4								
Methylene chloride	120		120		70-130	0		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	120		120		70-130	0		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	120		120		70-130	0		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	120		120		70-130	0		20
Chlorobenzene	120		120		70-130	0		20
Trichlorofluoromethane	120		120		70-130	0		20
1,2-Dichloroethane	110		120		70-130	9		20
1,1,1-Trichloroethane	120		120		70-130	0		20
Bromodichloromethane	110		120		70-130	9		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	120		120		70-130	0		20
Bromoform	100		110		70-130	10		20
1,1,2,2-Tetrachloroethane	110		110		70-130	0		20
Benzene	110		110		70-130	0		20
Toluene	120		120		70-130	0		20
Ethylbenzene	130		120		70-130	8		20
Chloromethane	100		110		70-130	10		20
Bromomethane	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 14-17,20-22 Batch: WG1491117-3 WG1491117-4								
Vinyl chloride	110		110		70-130	0		20
Chloroethane	110		110		70-130	0		20
1,1-Dichloroethene	120		120		70-130	0		20
trans-1,2-Dichloroethene	110		120		70-130	9		20
Trichloroethene	120		120		70-130	0		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	120		120		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	110		110		70-130	0		20
p/m-Xylene	130		125		70-130	4		20
o-Xylene	125		125		70-130	0		20
cis-1,2-Dichloroethene	120		120		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	100		110		70-130	10		20
Styrene	120		120		70-130	0		20
Dichlorodifluoromethane	100		100		70-130	0		20
Acetone	110		110		70-130	0		20
Carbon disulfide	120		120		70-130	0		20
Methyl ethyl ketone	110		110		70-130	0		20
Methyl isobutyl ketone	100		110		70-130	10		20
2-Hexanone	100		110		70-130	10		20
Bromochloromethane	110		120		70-130	9		20
Tetrahydrofuran	100		120		70-130	18		20

Lab Control Sample Analysis
Batch Quality Control

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Project Number: 3252H
Lab Number: L2119025
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 14-17,20-22 Batch: WG1491117-3 WG1491117-4								
2,2-Dichloropropane	120		120		70-130	0		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	120		120		70-130	0		20
1,1,1,2-Tetrachloroethane	120		110		70-130	9		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	110		120		70-130	9		20
sec-Butylbenzene	120		120		70-130	0		20
tert-Butylbenzene	120		120		70-130	0		20
o-Chlorotoluene	120		120		70-130	0		20
p-Chlorotoluene	110		120		70-130	9		20
1,2-Dibromo-3-chloropropane	100		120		70-130	18		20
Hexachlorobutadiene	120		120		70-130	0		20
Isopropylbenzene	110		120		70-130	9		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	99		100		70-130	1		20
n-Propylbenzene	120		120		70-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,3,5-Trimethylbenzene	110		120		70-130	9		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
Diethyl ether	120		120		70-130	0		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 14-17,20-22 Batch: WG1491117-3 WG1491117-4								
Tertiary-Amyl Methyl Ether	100		110		70-130	10		20
1,4-Dioxane	98		**146**	Q	70-130	**39**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	92		89		70-130
Toluene-d8	99		103		70-130
4-Bromofluorobenzene	94		98		70-130
Dibromofluoromethane	98		91		70-130

Lab Control Sample Analysis
Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05-06,10,18 Batch: WG1491733-3 WG1491733-4								
Methylene chloride	96		93		70-130	3		20
1,1-Dichloroethane	100		96		70-130	4		20
Chloroform	98		94		70-130	4		20
Carbon tetrachloride	98		95		70-130	3		20
1,2-Dichloropropane	100		97		70-130	3		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	98		94		70-130	4		20
Chlorobenzene	100		98		70-130	2		20
Trichlorofluoromethane	100		97		70-130	3		20
1,2-Dichloroethane	110		100		70-130	10		20
1,1,1-Trichloroethane	99		95		70-130	4		20
Bromodichloromethane	99		96		70-130	3		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	100		95		70-130	5		20
Bromoform	91		90		70-130	1		20
1,1,2,2-Tetrachloroethane	96		95		70-130	1		20
Benzene	99		96		70-130	3		20
Toluene	110		100		70-130	10		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	99		94		70-130	5		20
Bromomethane	100		93		70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05-06,10,18 Batch: WG1491733-3 WG1491733-4								
Vinyl chloride	100		98		70-130	2		20
Chloroethane	98		94		70-130	4		20
1,1-Dichloroethene	94		89		70-130	5		20
trans-1,2-Dichloroethene	92		87		70-130	6		20
Trichloroethene	91		87		70-130	4		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		99		70-130	1		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		99		70-130	1		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	105		100		70-130	5		20
cis-1,2-Dichloroethene	94		90		70-130	4		20
Dibromomethane	97		95		70-130	2		20
1,2,3-Trichloropropane	100		100		70-130	0		20
Styrene	105		100		70-130	5		20
Dichlorodifluoromethane	91		88		70-130	3		20
Acetone	110		110		70-130	0		20
Carbon disulfide	95		91		70-130	4		20
Methyl ethyl ketone	110		110		70-130	0		20
Methyl isobutyl ketone	100		99		70-130	1		20
2-Hexanone	110		110		70-130	0		20
Bromochloromethane	93		87		70-130	7		20
Tetrahydrofuran	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05-06,10,18 Batch: WG1491733-3 WG1491733-4								
2,2-Dichloropropane	110		100		70-130	10		20
1,2-Dibromoethane	110		100		70-130	10		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	88		86		70-130	2		20
n-Butylbenzene	130		120		70-130	8		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	82		81		70-130	1		20
Hexachlorobutadiene	84		82		70-130	2		20
Isopropylbenzene	97		95		70-130	2		20
p-Isopropyltoluene	110		100		70-130	10		20
Naphthalene	100		100		70-130	0		20
n-Propylbenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,3,5-Trimethylbenzene	130		130		70-130	0		20
1,2,4-Trimethylbenzene	**140**	Q	130		70-130	7		20
Diethyl ether	99		98		70-130	1		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05-06,10,18 Batch: WG1491733-3 WG1491733-4								
Tertiary-Amyl Methyl Ether	99		97		70-130	2		20
1,4-Dioxane	88		84		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	112		108		70-130
Toluene-d8	107		106		70-130
4-Bromofluorobenzene	91		95		70-130
Dibromofluoromethane	97		95		70-130

SEMIVOLATILES

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-01
Client ID: MW-SD13-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 16:00
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 01:48
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-01	Date Collected:	04/13/21 16:00
Client ID:	MW-SD13-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	49		15-110
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	79		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-01
Client ID: MW-SD13-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 16:00
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 21:20
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-01	Date Collected:	04/13/21 16:00
Client ID:	MW-SD13-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	34		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	50		15-110
4-Terphenyl-d14	81		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-01	Date Collected:	04/13/21 16:00
Client ID:	MW-SD13-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 23:03		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0791	J	ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-02
Client ID: MW-BS03-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:55
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 07:34
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.78	0.518	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.8	6.57	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.8	5.93	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.6	19.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.6	20.1	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	74		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	62		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	64		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	50		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-02	Date Collected:	04/13/21 15:55
Client ID:	MW-BS03-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 15:31		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.432	J	ng/l	1.78	0.364	1
Perfluoropentanoic Acid (PFPeA)	0.500	J	ng/l	1.78	0.354	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.78	0.212	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.78	0.404	1
Perfluorohexanoic Acid (PFHxA)	0.607	J	ng/l	1.78	0.293	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.78	0.219	1
Perfluoroheptanoic Acid (PFHpA)	0.350	J	ng/l	1.78	0.201	1
Perfluorohexanesulfonic Acid (PFHxS)	1.62	JF	ng/l	1.78	0.336	1
Perfluorooctanoic Acid (PFOA)	7.18		ng/l	1.78	0.211	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	2.36		ng/l	1.78	1.19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.78	0.614	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.78	0.278	1
Perfluorooctanesulfonic Acid (PFOS)	2.06		ng/l	1.78	0.450	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.78	0.271	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.78	1.08	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.78	1.00	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.78	0.578	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.78	0.232	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.78	0.875	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.78	0.718	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.78	0.332	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.78	0.292	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.78	0.221	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.6	20.3	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.78	0.300	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.57	1.11	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.57	1.02	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-02	Date Collected:	04/13/21 15:55
Client ID:	MW-BS03-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.78	0.550	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.46	1.80	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.78	0.247	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.78	0.262	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	86		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	77		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	75		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	81		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	73		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	76		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	92		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	81		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	103		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	75		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	85		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	103		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	50		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	80		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	65		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	83		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	84		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	66		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	120		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-02
Client ID: MW-BS03-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:55
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/20/21 02:11
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/18/21 09:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	3.1		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-02
Client ID: MW-BS03-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 15:55
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	69		15-110
4-Terphenyl-d14	66		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-02	Date Collected:	04/13/21 15:55
Client ID:	MW-BS03-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/18/21 09:30
Analytical Date:	04/24/21 21:40		
Analyst:	JRW		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.07	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.06	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-02	Date Collected:	04/13/21 15:55
Client ID:	MW-BS03-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	75		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-02	Date Collected:	04/13/21 15:55
Client ID:	MW-BS03-04132021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 12:00
Analytical Date:	04/25/21 23:28		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	10.6		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-04
Client ID: HA20-CMT-512-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 08:50
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 02:40
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-04	Date Collected:	04/14/21 08:50
Client ID:	HA20-CMT-512-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	99		15-110
Phenol-d6	84		15-110
Nitrobenzene-d5	120		30-130
2-Fluorobiphenyl	128		30-130
2,4,6-Tribromophenol	**147**	Q	15-110
4-Terphenyl-d14	**144**	Q	30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-04
Client ID: HA20-CMT-512-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 08:50
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 14:29
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	0.01	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.01	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.01	J	ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-04	Date Collected:	04/14/21 08:50
Client ID:	HA20-CMT-512-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	68		15-110
4-Terphenyl-d14	76		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-04	Date Collected:	04/14/21 08:50
Client ID:	HA20-CMT-512-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 15:00
Analytical Date:	04/27/21 16:51		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-05	Date Collected:	04/14/21 09:05
Client ID:	MW-SD30-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/19/21 23:21
Analytical Date:	04/21/21 03:02		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-05	Date Collected:	04/14/21 09:05
Client ID:	MW-SD30-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	66		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	95		15-110
4-Terphenyl-d14	85		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-05 Date Collected: 04/14/21 09:05
Client ID: MW-SD30-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water Extraction Method: EPA 3510C
Analytical Method: 97,8270D-SIM Extraction Date: 04/19/21 23:22
Analytical Date: 04/24/21 14:50
Analyst: JRW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-05	Date Collected:	04/14/21 09:05
Client ID:	MW-SD30-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	99		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	97		15-110
4-Terphenyl-d14	95		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-05	Date Collected:	04/14/21 09:05
Client ID:	MW-SD30-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 15:00
Analytical Date:	04/27/21 17:16		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0952	J	ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-06	Date Collected:	04/14/21 09:10
Client ID:	MW-SD06-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/19/21 23:21
Analytical Date:	04/21/21 03:25		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-06	Date Collected:	04/14/21 09:10
Client ID:	MW-SD06-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	89		15-110
4-Terphenyl-d14	85		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-06	Date Collected:	04/14/21 09:10
Client ID:	MW-SD06-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/19/21 23:22
Analytical Date:	04/24/21 15:10		
Analyst:	JRW		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.03	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	0.03	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.04	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	0.03	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-06	Date Collected:	04/14/21 09:10
Client ID:	MW-SD06-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	107		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	69		15-110
4-Terphenyl-d14	92		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-06	Date Collected:	04/14/21 09:10
Client ID:	MW-SD06-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 15:00
Analytical Date:	04/27/21 17:42		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	3.85		ug/l	0.156	0.0781	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-07
Client ID: MW-SM13-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 09:50
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 03:47
Analyst: SZ
Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-07	Date Collected:	04/14/21 09:50
Client ID:	MW-SM13-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	52		30-130
2-Fluorobiphenyl	56		30-130
2,4,6-Tribromophenol	67		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-07
Client ID: MW-SM13-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 09:50
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 15:31
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-07	Date Collected:	04/14/21 09:50
Client ID:	MW-SM13-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	102		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	66		15-110
4-Terphenyl-d14	100		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-07
Client ID: MW-SM13-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 09:50
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/27/21 18:07
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-08
Client ID: MW-S11-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 10:20
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 04:10
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-08	Date Collected:	04/14/21 10:20
Client ID:	MW-S11-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	66		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	76		15-110
4-Terphenyl-d14	75		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-08
Client ID: MW-S11-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 10:20
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 15:52
Analyst: JRW
Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.09	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.02	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-08	Date Collected:	04/14/21 10:20
Client ID:	MW-S11-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	45		15-110
Nitrobenzene-d5	92		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	59		15-110
4-Terphenyl-d14	80		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-08	Date Collected:	04/14/21 10:20
Client ID:	MW-S11-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 15:00
Analytical Date:	04/27/21 18:32		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-09
Client ID: MW-SD27-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 11:15
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 04:33
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.1	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-09 Date Collected: 04/14/21 11:15

Client ID: MW-SD27-04142021 Date Received: 04/14/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	90		15-110
Phenol-d6	69		15-110
Nitrobenzene-d5	88		30-130
2-Fluorobiphenyl	90		30-130
2,4,6-Tribromophenol	**115**	Q	15-110
4-Terphenyl-d14	91		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-09
Client ID: MW-SD27-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 11:15
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 16:13
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-09	Date Collected:	04/14/21 11:15
Client ID:	MW-SD27-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	65		15-110
Nitrobenzene-d5	126		30-130
2-Fluorobiphenyl	92		30-130
2,4,6-Tribromophenol	98		15-110
4-Terphenyl-d14	105		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-09
Client ID: MW-SD27-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 11:15
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/27/21 18:57
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.120	J	ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-10	Date Collected:	04/14/21 11:30
Client ID:	HB-10S-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/19/21 23:21
Analytical Date:	04/21/21 04:55		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.6	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-10	Date Collected:	04/14/21 11:30
Client ID:	HB-10S-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		15-110
Phenol-d6	65		15-110
Nitrobenzene-d5	88		30-130
2-Fluorobiphenyl	92		30-130
2,4,6-Tribromophenol	97		15-110
4-Terphenyl-d14	94		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-10
Client ID: HB-10S-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 11:30
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 16:33
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.04	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.04	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.01	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.04	J	ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-10	Date Collected:	04/14/21 11:30
Client ID:	HB-10S-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	**131**	Q	30-130
2-Fluorobiphenyl	99		30-130
2,4,6-Tribromophenol	85		15-110
4-Terphenyl-d14	113		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-10
Client ID: HB-10S-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 11:30
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/27/21 19:22
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.886		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-11
Client ID: HA20-CMT-6S-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 11:20
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 05:18
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	29		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-11 Date Collected: 04/14/21 11:20
Client ID: HA20-CMT-6S-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	69		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	95		15-110
4-Terphenyl-d14	78		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-11
Client ID: HA20-CMT-6S-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 11:20
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 16:54
Analyst: JRW
Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.02	J	ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	0.01	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-11	Date Collected:	04/14/21 11:20
Client ID:	HA20-CMT-6S-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	113		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	98		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-11
Client ID: HA20-CMT-6S-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 11:20
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/27/21 19:45
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/21/21 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-12
Client ID: BEW-3-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 10:30
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 06:26
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	12		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-12	Date Collected:	04/14/21 10:30
Client ID:	BEW-3-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	77		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	68		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	72		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	103		15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-12
Client ID: BEW-3-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 10:30
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 17:14
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.04	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.06	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.10		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.05	J	ug/l	0.10	0.01	1
Chrysene	0.03	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.10	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.10		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-12	Date Collected:	04/14/21 10:30
Client ID:	BEW-3-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	99		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	83		15-110
4-Terphenyl-d14	91		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-12	Date Collected:	04/14/21 10:30
Client ID:	BEW-3-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 15:00
Analytical Date:	04/27/21 20:09		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	37.9		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS

Lab Number: L2119025

Project Number: 3252H

Report Date: 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-13	Date Collected:	04/14/21 13:00
Client ID:	EQ BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 10:19		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.77	0.514	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.7	6.52	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.7	5.89	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.3	19.7	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.3	20.0	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	74		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	54		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	57		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	57		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	62		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-13
Client ID: EQ BLANK1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:00
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 15:48
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.77	0.362	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.77	0.351	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.77	0.211	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.77	0.401	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.77	0.291	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.77	0.217	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.77	0.200	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.77	0.333	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.77	0.209	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.77	1.18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.77	0.610	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.77	0.276	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.77	0.447	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.77	0.270	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.77	1.07	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.77	0.993	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.77	0.574	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.77	0.230	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.77	0.869	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.77	0.713	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.77	0.330	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.77	0.290	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.77	0.220	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.3	20.1	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.77	0.298	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.55	1.10	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.55	1.02	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-13	Date Collected:	04/14/21 13:00
Client ID:	EQ BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.77	0.546	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.43	1.79	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.77	0.245	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.77	0.260	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	98		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	87		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	89		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	72		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	82		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	85		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	109		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	93		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	127		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	94		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	105		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	98		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	149		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	78		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	100		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	89		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	116		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	107		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	90		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	130		10-206

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-13
Client ID: EQ BLANK1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:00
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 06:49
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-13	Date Collected:	04/14/21 13:00
Client ID:	EQ BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	95		30-130
2,4,6-Tribromophenol	80		15-110
4-Terphenyl-d14	104		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-13
Client ID: EQ BLANK1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:00
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 17:35
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-13	Date Collected:	04/14/21 13:00
Client ID:	EQ BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	119		30-130
2-Fluorobiphenyl	91		30-130
2,4,6-Tribromophenol	58		15-110
4-Terphenyl-d14	112		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-13	Date Collected:	04/14/21 13:00
Client ID:	EQ BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 15:00
Analytical Date:	04/27/21 21:21		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-14
Client ID: P-1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 09:15
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 07:11
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.6	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-14 Date Collected: 04/14/21 09:15
Client ID: P-1-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	92		15-110
4-Terphenyl-d14	86		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-14
Client ID: P-1-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 09:15
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 17:55
Analyst: JRW
Extraction Method: EPA 3510C
Extraction Date: 04/20/21 00:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.02	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-14	Date Collected:	04/14/21 09:15
Client ID:	P-1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		15-110
Phenol-d6	51		15-110
Nitrobenzene-d5	100		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	75		15-110
4-Terphenyl-d14	91		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-14	Date Collected:	04/14/21 09:15
Client ID:	P-1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 15:00
Analytical Date:	04/27/21 21:45		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	2.53		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-15
Client ID: P-2-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 11:10
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 07:34
Analyst: SZ
Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-15 Date Collected: 04/14/21 11:10
Client ID: P-2-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	102		15-110
4-Terphenyl-d14	90		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-15
Client ID: P-2-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 11:10
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 18:16
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 00:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-15	Date Collected:	04/14/21 11:10
Client ID:	P-2-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	105		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	89		15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-15
Date Collected: 04/14/21 11:10
Client ID: P-2-04142021
Date Received: 04/14/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Extraction Method: EPA 3510C
Analytical Method: 97,8270D-SIM
Extraction Date: 04/21/21 19:30
Analytical Date: 04/27/21 07:48
Analyst: SMB

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.194		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-16
Client ID: P-3-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 12:45
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 07:57
Analyst: SZ
Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-16 Date Collected: 04/14/21 12:45

Client ID: P-3-04142021 Date Received: 04/14/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	91		15-110
4-Terphenyl-d14	89		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-16
Client ID: P-3-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 12:45
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 18:36
Analyst: JRW
Extraction Method: EPA 3510C
Extraction Date: 04/20/21 00:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-16	Date Collected:	04/14/21 12:45
Client ID:	P-3-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		15-110
Phenol-d6	52		15-110
Nitrobenzene-d5	104		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	99		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-16
Client ID: P-3-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 12:45
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/27/21 08:08
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 19:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.233		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	60		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-17
Client ID: PW-6-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:30
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 08:19
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-17	Date Collected:	04/14/21 13:30
Client ID:	PW-6-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		15-110
Phenol-d6	46		15-110
Nitrobenzene-d5	57		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	64		15-110
4-Terphenyl-d14	64		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-17
Client ID: PW-6-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:30
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 18:57
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 00:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-17
Client ID: PW-6-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 13:30
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		15-110
Phenol-d6	42		15-110
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	64		30-130
2,4,6-Tribromophenol	51		15-110
4-Terphenyl-d14	75		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-17	Date Collected:	04/14/21 13:30
Client ID:	PW-6-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 19:30
Analytical Date:	04/27/21 08:28		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.156	0.0781	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	60		15-110

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-18
Client ID: MW-S27-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:55
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 10:26
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.78	0.516	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.8	6.55	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.8	5.91	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.5	19.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.5	20.0	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	77		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	64		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	64		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	62		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	57		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-18	Date Collected:	04/14/21 13:55
Client ID:	MW-S27-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 16:04		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	1.96		ng/l	1.78	0.363	1
Perfluoropentanoic Acid (PFPeA)	4.17		ng/l	1.78	0.352	1
Perfluorobutanesulfonic Acid (PFBS)	1.69	J	ng/l	1.78	0.212	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.78	0.402	1
Perfluorohexanoic Acid (PFHxA)	4.24		ng/l	1.78	0.292	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.78	0.218	1
Perfluoroheptanoic Acid (PFHpA)	1.62	J	ng/l	1.78	0.200	1
Perfluorohexanesulfonic Acid (PFHxS)	0.893	J	ng/l	1.78	0.334	1
Perfluorooctanoic Acid (PFOA)	4.48		ng/l	1.78	0.210	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.78	1.18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.78	0.612	1
Perfluorononanoic Acid (PFNA)	0.310	J	ng/l	1.78	0.278	1
Perfluorooctanesulfonic Acid (PFOS)	3.72		ng/l	1.78	0.448	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.78	0.270	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.78	1.08	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.78	0.996	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.78	0.576	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.78	0.231	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.78	0.872	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.78	0.715	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.78	0.331	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.78	0.291	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.78	0.221	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.5	20.2	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.78	0.299	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.56	1.10	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.56	1.02	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-18	Date Collected:	04/14/21 13:55
Client ID:	MW-S27-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.78	0.548	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.45	1.80	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.78	0.246	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.78	0.261	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	70		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	75		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	84		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	82		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	59		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**59**	Q	60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	98		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	67		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	80		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	72		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	95		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	73		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	100		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	49		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	74		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	54		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	86		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	83		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	68		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	105		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-18
Client ID: MW-S27-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:55
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 08:42
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-18	Date Collected:	04/14/21 13:55
Client ID:	MW-S27-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		15-110
Phenol-d6	60		15-110
Nitrobenzene-d5	74		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	93		15-110
4-Terphenyl-d14	88		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-18	Date Collected:	04/14/21 13:55
Client ID:	MW-S27-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/20/21 00:43
Analytical Date:	04/24/21 19:17		
Analyst:	JRW		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.01	J	ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	0.01	J	ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-18	Date Collected:	04/14/21 13:55
Client ID:	MW-S27-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	105		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	82		15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119025

Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-18
Client ID: MW-S27-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:55
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/27/21 08:48
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 19:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0911	J	ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	56		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-19	Date Collected:	04/14/21 14:00
Client ID:	FIELD BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 10:34		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.93	0.560	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	19.3	7.10	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	19.3	6.41	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	48.3	21.4	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	48.3	21.7	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	74		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	50		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	48		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	59		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	54		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-19
Client ID: FIELD BLANK1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 14:00
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 16:21
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.93	0.394	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.93	0.382	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.93	0.230	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.93	0.436	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.93	0.317	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.93	0.237	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.93	0.217	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.93	0.363	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.93	0.228	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.93	1.28	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.93	0.664	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.93	0.301	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.93	0.486	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.93	0.293	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.93	1.17	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.93	1.08	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.93	0.625	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.93	0.251	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.93	0.946	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.93	0.776	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.93	0.359	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.93	0.316	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.93	0.239	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	48.3	21.9	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.93	0.324	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.86	1.20	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.86	1.11	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-19	Date Collected:	04/14/21 14:00
Client ID:	FIELD BLANK1-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.93	0.594	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.83	1.95	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.93	0.267	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.93	0.283	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	94		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	86		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	84		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	61		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	80		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	82		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	101		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	86		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	107		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	89		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	96		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	89		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	135		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	82		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	93		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	88		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	104		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	97		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	91		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	117		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-20
Client ID: HBPZ-2R-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 14:30
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 23:25
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-20 Date Collected: 04/14/21 14:30

Client ID: HBPZ-2R-04142021 Date Received: 04/14/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		15-110
Phenol-d6	67		15-110
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-20
Client ID: HBPZ-2R-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 14:30
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 19:38
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-20	Date Collected:	04/14/21 14:30
Client ID:	HBPZ-2R-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	58		15-110
Nitrobenzene-d5	106		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	89		15-110
4-Terphenyl-d14	83		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-20
Client ID: HBPZ-2R-04142021
Sample Location: CONCORD, MA

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/27/21 09:07
Analyst: SMB

Date Collected: 04/14/21 14:30
Date Received: 04/14/21
Field Prep: Refer to COC

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 19:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.163	0.0815	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	58		15-110

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-21
Client ID: HA20-CMT-6I-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 14:05
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 23:49
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-21 Date Collected: 04/14/21 14:05
Client ID: HA20-CMT-6I-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	82		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-21
Client ID: HA20-CMT-6I-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 14:05
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 19:58
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-21	Date Collected:	04/14/21 14:05
Client ID:	HA20-CMT-6I-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	103		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	**115**	Q	15-110
4-Terphenyl-d14	84		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-21	Date Collected:	04/14/21 14:05
Client ID:	HA20-CMT-6I-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 19:30
Analytical Date:	04/27/21 09:28		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.228		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	58		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119025

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-22	Date Collected:	04/14/21 13:40
Client ID:	MW-S01-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/21/21 00:54
Analytical Date:	04/22/21 00:12		
Analyst:	EK		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-22	Date Collected:	04/14/21 13:40
Client ID:	MW-S01-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	85		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	79		15-110
4-Terphenyl-d14	70		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119025

Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-22
Client ID: MW-S01-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:40
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 20:19
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-22	Date Collected:	04/14/21 13:40
Client ID:	MW-S01-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	102		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	92		15-110
4-Terphenyl-d14	84		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-22	Date Collected:	04/14/21 13:40
Client ID:	MW-S01-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 19:30
Analytical Date:	04/27/21 09:48		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	4.12		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	66		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-23
Client ID: MW-S01-04142021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:45
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/22/21 00:36
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-23	Date Collected:	04/14/21 13:45
Client ID:	MW-S01-04142021 DUP	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	74		15-110
4-Terphenyl-d14	69		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-23
Client ID: MW-S01-04142021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:45
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/24/21 20:39
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-23	Date Collected:	04/14/21 13:45
Client ID:	MW-S01-04142021 DUP	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	55		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	72		30-130
2,4,6-Tribromophenol	87		15-110
4-Terphenyl-d14	80		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-23
Client ID: MW-S01-04142021 DUP
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:45
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/27/21 10:08
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 19:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	3.97		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-24	Date Collected:	04/14/21 16:05
Client ID:	HB-10-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 10:41		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	0.652	JF	ng/l	1.77	0.514	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.7	6.52	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.7	5.89	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	44.3	19.7	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	44.3	20.0	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	61		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	61		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	56		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	53		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-24	Date Collected:	04/14/21 16:05
Client ID:	HB-10-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/15/21 09:20
Analytical Date:	04/20/21 16:37		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	1.13	J	ng/l	1.77	0.362	1
Perfluoropentanoic Acid (PFPeA)	3.10		ng/l	1.77	0.351	1
Perfluorobutanesulfonic Acid (PFBS)	0.351	J	ng/l	1.77	0.211	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.77	0.401	1
Perfluorohexanoic Acid (PFHxA)	1.46	J	ng/l	1.77	0.291	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.77	0.217	1
Perfluoroheptanoic Acid (PFHpA)	0.865	J	ng/l	1.77	0.200	1
Perfluorohexanesulfonic Acid (PFHxS)	0.489	J	ng/l	1.77	0.333	1
Perfluorooctanoic Acid (PFOA)	3.57		ng/l	1.77	0.209	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.77	1.18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.77	0.610	1
Perfluorononanoic Acid (PFNA)	0.284	J	ng/l	1.77	0.276	1
Perfluorooctanesulfonic Acid (PFOS)	6.35		ng/l	1.77	0.447	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.77	0.270	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.77	1.07	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.77	0.993	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.77	0.574	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.77	0.230	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.77	0.869	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.77	0.713	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.77	0.330	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.77	0.290	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.77	0.220	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	44.3	20.1	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.77	0.298	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.55	1.10	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.55	1.02	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-24
Client ID: HB-10-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 16:05
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.77	0.546	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.43	1.79	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.77	0.245	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.77	0.260	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	76		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	66		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	79		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	101		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	62		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	65		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	101		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	72		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	91		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	72		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	96		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	75		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	96		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	31		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	72		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	48		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	84		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	88		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	76		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	105		10-206

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-24	Date Collected:	04/14/21 16:05
Client ID:	HB-10-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/21/21 00:54
Analytical Date:	04/22/21 01:00		
Analyst:	EK		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-24	Date Collected:	04/14/21 16:05
Client ID:	HB-10-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	67		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	69		30-130

Project Name: NUCLEAR METALS　　**Lab Number:** L2119025
Project Number: 3252H　　**Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-24　　Date Collected: 04/14/21 16:05
Client ID: HB-10-04142021　　Date Received: 04/14/21
Sample Location: CONCORD, MA　　Field Prep: Not Specified

Sample Depth:
Matrix: Water　　Extraction Method: EPA 3510C
Analytical Method: 97,8270D-SIM　　Extraction Date: 04/21/21 00:58
Analytical Date: 04/24/21 20:59
Analyst: JRW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

SAMPLE RESULTS

Lab ID:	L2119025-24	Date Collected:	04/14/21 16:05
Client ID:	HB-10-04142021	Date Received:	04/14/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	93		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	88		15-110
4-Terphenyl-d14	75		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-24
Client ID: HB-10-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:05
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/27/21 10:28
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 19:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.536		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	54		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/20/21 05:38	Extraction Date:	04/15/21 09:20
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 02,13,18-19,24 Batch: WG1486508-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	50		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	46		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		10-187

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 02,13,18-19,24 Batch: WG1486508-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 02,13,18-19,24 Batch: WG1486508-1					
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/20/21 08:02
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/15/21 09:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 02,13,18-19,24 Batch: WG1486508-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	84		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	88		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	60		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	78		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	97		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	91		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	114		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	84		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	121		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	69		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	89		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	46		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	103		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	91		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	90		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	113		10-206

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 17:32
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG1487590-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	1.8	J	ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/19/21 17:32
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/17/21 17:56

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG1487590-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/19/21 17:32	Extraction Date:	04/17/21 17:56
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG1487590-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	94		15-110
4-Terphenyl-d14	92		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/19/21 09:17	Extraction Date:	04/17/21 17:56
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-02 Batch: WG1487591-1					
Acenaphthene	0.03	J	ug/l	0.10	0.01
2-Chloronaphthalene	0.11	J	ug/l	0.20	0.02
Fluoranthene	0.05	J	ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02
Benzo(a)pyrene	0.03	J	ug/l	0.10	0.02
Benzo(b)fluoranthene	0.04	J	ug/l	0.10	0.01
Benzo(k)fluoranthene	0.04	J	ug/l	0.10	0.01
Chrysene	0.04	J	ug/l	0.10	0.01
Acenaphthylene	0.04	J	ug/l	0.10	0.01
Anthracene	0.03	J	ug/l	0.10	0.01
Benzo(ghi)perylene	0.04	J	ug/l	0.10	0.01
Fluorene	0.03	J	ug/l	0.10	0.01
Phenanthrene	0.05	J	ug/l	0.10	0.02
Dibenzo(a,h)anthracene	0.04	J	ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	0.04	J	ug/l	0.10	0.01
Pyrene	0.05	J	ug/l	0.10	0.02
2-Methylnaphthalene	0.09	J	ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/19/21 09:17	Extraction Date:	04/17/21 17:56
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-02 Batch: WG1487591-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	108		30-130
2,4,6-Tribromophenol	72		15-110
4-Terphenyl-d14	107		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 01:32
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 04-18 Batch: WG1488186-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 01:32
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 04-18 Batch: WG1488186-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/21/21 01:32	Extraction Date:	04/19/21 23:21
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 04-18 Batch: WG1488186-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	84		15-110
4-Terphenyl-d14	90		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 20:09
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 04-18 Batch: WG1488187-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/23/21 20:09
Analyst: JRW

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:22

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 04-18 Batch: WG1488187-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	57		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	89		15-110
4-Terphenyl-d14	98		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 12:47
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-02 Batch: WG1488286-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 19:27
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:54

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 20-24 Batch: WG1488687-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 19:27
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:54

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 20-24 Batch: WG1488687-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 19:27
Analyst: EK
Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:54

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 20-24 Batch: WG1488687-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	68		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/21/21 13:30	Extraction Date:	04/21/21 00:58
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 20-24 Batch: WG1488688-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 13:30
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 20-24 Batch: WG1488688-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	89		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	**113**	Q	15-110
4-Terphenyl-d14	78		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119025
Project Number:	3252H	**Report Date:**	05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/27/21 15:33	Extraction Date:	04/21/21 15:00
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 04-14 Batch: WG1488931-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 12:28
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 19:30

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 15-18,20-24 Batch: WG1488989-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	64		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,13,18-19,24 Batch: WG1486508-2								
Perfluorooctanesulfonamide (FOSA)	86		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	109		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	119		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	99		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	103		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	46				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	42				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	49				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	48				10-187

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,13,18-19,24 Batch: WG1486508-2								
Perfluorobutanoic Acid (PFBA)	106		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	108		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	115		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	118		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	110		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	93		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	107		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	100		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	109		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	110		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	106		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	116		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	108		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	113		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	109		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	104		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	142		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	114		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	106		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	107		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	102		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	99		-		67-153	-		30

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,13,18-19,24 Batch: WG1486508-2								
Perfluorotridecanoic Acid (PFTrDA)	121		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	113		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	120		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	106		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	97		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	78		-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	128		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	102		-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	86		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	77		-		52-156	-		30

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,13,18-19,24 Batch: WG1486508-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	88				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	77				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	67				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	72				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	77				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	93				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	85				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	125				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	79				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	83				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	130				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	63				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	93				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	47				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	96				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	96				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	81				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	117				10-206

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG1487590-2 WG1487590-3								
Acenaphthene	76		70		40-140	8		20
1,2,4-Trichlorobenzene	65		63		40-140	3		20
Hexachlorobenzene	83		73		40-140	13		20
Bis(2-chloroethyl)ether	67		65		40-140	3		20
2-Chloronaphthalene	70		64		40-140	9		20
1,2-Dichlorobenzene	62		60		40-140	3		20
1,3-Dichlorobenzene	59		59		40-140	0		20
1,4-Dichlorobenzene	59		61		40-140	3		20
3,3'-Dichlorobenzidine	69		59		40-140	16		20
2,4-Dinitrotoluene	88		80		40-140	10		20
2,6-Dinitrotoluene	89		74		40-140	18		20
Azobenzene	76		68		40-140	11		20
Fluoranthene	87		81		40-140	7		20
4-Bromophenyl phenyl ether	86		72		40-140	18		20
Bis(2-chloroisopropyl)ether	75		71		40-140	5		20
Bis(2-chloroethoxy)methane	71		66		40-140	7		20
Hexachlorobutadiene	68		66		40-140	3		20
Hexachloroethane	60		65		40-140	8		20
Isophorone	72		65		40-140	10		20
Naphthalene	68		65		40-140	5		20
Nitrobenzene	80		75		40-140	6		20
Bis(2-ethylhexyl)phthalate	104		108		40-140	4		20
Butyl benzyl phthalate	100		95		40-140	5		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG1487590-2 WG1487590-3								
Di-n-butylphthalate	93		85		40-140	9		20
Di-n-octylphthalate	108		107		40-140	1		20
Diethyl phthalate	88		79		40-140	11		20
Dimethyl phthalate	82		71		40-140	14		20
Benzo(a)anthracene	94		84		40-140	11		20
Benzo(a)pyrene	97		86		40-140	12		20
Benzo(b)fluoranthene	95		93		40-140	2		20
Benzo(k)fluoranthene	100		79		40-140	**23**	Q	20
Chrysene	91		79		40-140	14		20
Acenaphthylene	71		68		40-140	4		20
Anthracene	83		75		40-140	10		20
Benzo(ghi)perylene	96		86		40-140	11		20
Fluorene	76		68		40-140	11		20
Phenanthrene	82		72		40-140	13		20
Dibenzo(a,h)anthracene	98		87		40-140	12		20
Indeno(1,2,3-cd)pyrene	100		89		40-140	12		20
Pyrene	85		77		40-140	10		20
Aniline	**29**	Q	**30**	Q	40-140	3		20
4-Chloroaniline	54		46		40-140	16		20
Dibenzofuran	73		67		40-140	9		20
2-Methylnaphthalene	70		64		40-140	9		20
Acetophenone	71		65		40-140	9		20
2,4,6-Trichlorophenol	82		71		30-130	14		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG1487590-2 WG1487590-3								
2-Chlorophenol	71		66		30-130	7		20
2,4-Dichlorophenol	79		70		30-130	12		20
2,4-Dimethylphenol	55		55		30-130	0		20
2-Nitrophenol	101		91		30-130	10		20
4-Nitrophenol	77		65		30-130	17		20
2,4-Dinitrophenol	107		97		30-130	10		20
Pentachlorophenol	92		78		30-130	16		20
Phenol	47		45		30-130	4		20
2-Methylphenol	63		59		30-130	7		20
3-Methylphenol/4-Methylphenol	68		59		30-130	14		20
2,4,5-Trichlorophenol	85		73		30-130	15		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	68		68		15-110
Phenol-d6	59		55		15-110
Nitrobenzene-d5	79		74		30-130
2-Fluorobiphenyl	70		64		30-130
2,4,6-Tribromophenol	**126**	Q	109		15-110
4-Terphenyl-d14	90		79		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1487591-2 WG1487591-3								
Acenaphthene	87		95		40-140	9		20
2-Chloronaphthalene	78		60		40-140	**26**	Q	20
Fluoranthene	102		97		40-140	5		20
Hexachlorobutadiene	68		64		40-140	6		20
Naphthalene	78		81		40-140	4		20
Benzo(a)anthracene	95		90		40-140	5		20
Benzo(a)pyrene	101		93		40-140	8		20
Benzo(b)fluoranthene	108		97		40-140	11		20
Benzo(k)fluoranthene	104		99		40-140	5		20
Chrysene	109		106		40-140	3		20
Acenaphthylene	78		61		40-140	**24**	Q	20
Anthracene	92		104		40-140	12		20
Benzo(ghi)perylene	115		92		40-140	**22**	Q	20
Fluorene	90		89		40-140	1		20
Phenanthrene	92		95		40-140	3		20
Dibenzo(a,h)anthracene	118		99		40-140	18		20
Indeno(1,2,3-cd)pyrene	110		94		40-140	16		20
Pyrene	104		100		40-140	4		20
2-Methylnaphthalene	78		65		40-140	18		20
Pentachlorophenol	93		96		30-130	3		20
Hexachlorobenzene	85		86		40-140	1		20
Hexachloroethane	74		62		40-140	18		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1487591-2 WG1487591-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	71		90		15-110
Phenol-d6	65		80		15-110
Nitrobenzene-d5	109		90		30-130
2-Fluorobiphenyl	76		58		30-130
2,4,6-Tribromophenol	110		101		15-110
4-Terphenyl-d14	109		105		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 04-18 Batch: WG1488186-2 WG1488186-3								
Acenaphthene	73		75		40-140	3		20
1,2,4-Trichlorobenzene	76		76		40-140	0		20
Hexachlorobenzene	84		85		40-140	1		20
Bis(2-chloroethyl)ether	68		68		40-140	0		20
2-Chloronaphthalene	78		80		40-140	3		20
1,2-Dichlorobenzene	69		70		40-140	1		20
1,3-Dichlorobenzene	69		69		40-140	0		20
1,4-Dichlorobenzene	69		68		40-140	1		20
3,3'-Dichlorobenzidine	64		62		40-140	3		20
2,4-Dinitrotoluene	86		89		40-140	3		20
2,6-Dinitrotoluene	96		103		40-140	7		20
Azobenzene	62		66		40-140	6		20
Fluoranthene	81		87		40-140	7		20
4-Bromophenyl phenyl ether	86		89		40-140	3		20
Bis(2-chloroisopropyl)ether	75		79		40-140	5		20
Bis(2-chloroethoxy)methane	66		70		40-140	6		20
Hexachlorobutadiene	76		75		40-140	1		20
Hexachloroethane	63		67		40-140	6		20
Isophorone	63		69		40-140	9		20
Naphthalene	72		74		40-140	3		20
Nitrobenzene	74		79		40-140	7		20
Bis(2-ethylhexyl)phthalate	72		79		40-140	9		20
Butyl benzyl phthalate	78		86		40-140	10		20

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Lab Number: L2119025
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 04-18 Batch: WG1488186-2 WG1488186-3								
Di-n-butylphthalate	69		76		40-140	10		20
Di-n-octylphthalate	80		86		40-140	7		20
Diethyl phthalate	75		78		40-140	4		20
Dimethyl phthalate	85		90		40-140	6		20
Benzo(a)anthracene	78		82		40-140	5		20
Benzo(a)pyrene	84		87		40-140	4		20
Benzo(b)fluoranthene	85		90		40-140	6		20
Benzo(k)fluoranthene	82		85		40-140	4		20
Chrysene	78		81		40-140	4		20
Acenaphthylene	76		81		40-140	6		20
Anthracene	78		81		40-140	4		20
Benzo(ghi)perylene	81		83		40-140	2		20
Fluorene	75		77		40-140	3		20
Phenanthrene	75		80		40-140	6		20
Dibenzo(a,h)anthracene	80		84		40-140	5		20
Indeno(1,2,3-cd)pyrene	83		88		40-140	6		20
Pyrene	79		84		40-140	6		20
Aniline	**34**	Q	**29**	Q	40-140	16		20
4-Chloroaniline	55		52		40-140	6		20
Dibenzofuran	74		76		40-140	3		20
2-Methylnaphthalene	76		76		40-140	0		20
Acetophenone	68		72		40-140	6		20
2,4,6-Trichlorophenol	95		98		30-130	3		20

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 04-18 Batch: WG1488186-2 WG1488186-3								
2-Chlorophenol	73		78		30-130	7		20
2,4-Dichlorophenol	86		92		30-130	7		20
2,4-Dimethylphenol	67		76		30-130	13		20
2-Nitrophenol	108		111		30-130	3		20
4-Nitrophenol	67		71		30-130	6		20
2,4-Dinitrophenol	119		128		30-130	7		20
Pentachlorophenol	97		101		30-130	4		20
Phenol	50		52		30-130	4		20
2-Methylphenol	69		74		30-130	7		20
3-Methylphenol/4-Methylphenol	71		77		30-130	8		20
2,4,5-Trichlorophenol	95		100		30-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	79		83		15-110
Phenol-d6	64		66		15-110
Nitrobenzene-d5	78		80		30-130
2-Fluorobiphenyl	81		85		30-130
2,4,6-Tribromophenol	**128**	Q	**135**	Q	15-110
4-Terphenyl-d14	82		88		30-130

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 04-18 Batch: WG1488187-2 WG1488187-3								
Acenaphthene	71		65		40-140	9		20
2-Chloronaphthalene	82		73		40-140	12		20
Fluoranthene	88		79		40-140	11		20
Hexachlorobutadiene	69		63		40-140	9		20
Naphthalene	67		61		40-140	9		20
Benzo(a)anthracene	78		69		40-140	12		20
Benzo(a)pyrene	96		88		40-140	9		20
Benzo(b)fluoranthene	74		70		40-140	6		20
Benzo(k)fluoranthene	96		89		40-140	8		20
Chrysene	87		83		40-140	5		20
Acenaphthylene	81		72		40-140	12		20
Anthracene	82		77		40-140	6		20
Benzo(ghi)perylene	96		90		40-140	6		20
Fluorene	76		69		40-140	10		20
Phenanthrene	67		63		40-140	6		20
Dibenzo(a,h)anthracene	106		98		40-140	8		20
Indeno(1,2,3-cd)pyrene	94		88		40-140	7		20
Pyrene	89		79		40-140	12		20
2-Methylnaphthalene	73		67		40-140	9		20
Pentachlorophenol	119		108		30-130	10		20
Hexachlorobenzene	76		72		40-140	5		20
Hexachloroethane	63		56		40-140	12		20

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Project Number: 3252H **Report Date:** 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 04-18 Batch: WG1488187-2 WG1488187-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	64		59		15-110
Phenol-d6	63		51		15-110
Nitrobenzene-d5	74		68		30-130
2-Fluorobiphenyl	79		72		30-130
2,4,6-Tribromophenol	**141**	Q	**123**	Q	15-110
4-Terphenyl-d14	98		83		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119025

Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG1488286-2 WG1488286-3								
1,4-Dioxane	105		108		40-140	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	44		44		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 20-24 Batch: WG1488687-2 WG1488687-3								
Acenaphthene	67		69		40-140	3		20
1,2,4-Trichlorobenzene	61		61		40-140	0		20
Hexachlorobenzene	62		66		40-140	6		20
Bis(2-chloroethyl)ether	73		75		40-140	3		20
2-Chloronaphthalene	66		69		40-140	4		20
1,2-Dichlorobenzene	63		63		40-140	0		20
1,3-Dichlorobenzene	64		63		40-140	2		20
1,4-Dichlorobenzene	64		65		40-140	2		20
3,3'-Dichlorobenzidine	58		57		40-140	2		20
2,4-Dinitrotoluene	75		79		40-140	5		20
2,6-Dinitrotoluene	71		79		40-140	11		20
Azobenzene	68		73		40-140	7		20
Fluoranthene	71		76		40-140	7		20
4-Bromophenyl phenyl ether	62		67		40-140	8		20
Bis(2-chloroisopropyl)ether	72		73		40-140	1		20
Bis(2-chloroethoxy)methane	70		73		40-140	4		20
Hexachlorobutadiene	68		66		40-140	3		20
Hexachloroethane	68		68		40-140	0		20
Isophorone	70		73		40-140	4		20
Naphthalene	68		68		40-140	0		20
Nitrobenzene	82		81		40-140	1		20
Bis(2-ethylhexyl)phthalate	76		77		40-140	1		20
Butyl benzyl phthalate	75		82		40-140	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 20-24 Batch: WG1488687-2 WG1488687-3								
Di-n-butylphthalate	68		71		40-140	4		20
Di-n-octylphthalate	80		80		40-140	0		20
Diethyl phthalate	69		72		40-140	4		20
Dimethyl phthalate	68		72		40-140	6		20
Benzo(a)anthracene	76		78		40-140	3		20
Benzo(a)pyrene	92		94		40-140	2		20
Benzo(b)fluoranthene	81		83		40-140	2		20
Benzo(k)fluoranthene	85		83		40-140	2		20
Chrysene	75		75		40-140	0		20
Acenaphthylene	73		77		40-140	5		20
Anthracene	74		74		40-140	0		20
Benzo(ghi)perylene	80		79		40-140	1		20
Fluorene	67		71		40-140	6		20
Phenanthrene	72		73		40-140	1		20
Dibenzo(a,h)anthracene	79		79		40-140	0		20
Indeno(1,2,3-cd)pyrene	80		81		40-140	1		20
Pyrene	70		73		40-140	4		20
Aniline	**25**	Q	**24**	Q	40-140	4		20
4-Chloroaniline	51		45		40-140	13		20
Dibenzofuran	68		69		40-140	1		20
2-Methylnaphthalene	68		70		40-140	3		20
Acetophenone	71		74		40-140	4		20
2,4,6-Trichlorophenol	80		80		30-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 20-24 Batch: WG1488687-2 WG1488687-3								
2-Chlorophenol	72		75		30-130	4		20
2,4-Dichlorophenol	75		78		30-130	4		20
2,4-Dimethylphenol	80		80		30-130	0		20
2-Nitrophenol	95		98		30-130	3		20
4-Nitrophenol	70		78		30-130	11		20
2,4-Dinitrophenol	88		97		30-130	10		20
Pentachlorophenol	76		84		30-130	10		20
Phenol	58		61		30-130	5		20
2-Methylphenol	72		76		30-130	5		20
3-Methylphenol/4-Methylphenol	77		77		30-130	0		20
2,4,5-Trichlorophenol	77		78		30-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	81		82		15-110
Phenol-d6	67		69		15-110
Nitrobenzene-d5	80		83		30-130
2-Fluorobiphenyl	72		74		30-130
2,4,6-Tribromophenol	82		85		15-110
4-Terphenyl-d14	68		71		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 20-24 Batch: WG1488688-2 WG1488688-3								
Acenaphthene	73		78		40-140	7		20
2-Chloronaphthalene	71		76		40-140	7		20
Fluoranthene	78		80		40-140	3		20
Hexachlorobutadiene	70		78		40-140	11		20
Naphthalene	68		84		40-140	**21**	Q	20
Benzo(a)anthracene	72		77		40-140	7		20
Benzo(a)pyrene	75		78		40-140	4		20
Benzo(b)fluoranthene	81		77		40-140	5		20
Benzo(k)fluoranthene	78		84		40-140	7		20
Chrysene	82		84		40-140	2		20
Acenaphthylene	73		78		40-140	7		20
Anthracene	74		76		40-140	3		20
Benzo(ghi)perylene	75		80		40-140	6		20
Fluorene	77		86		40-140	11		20
Phenanthrene	74		77		40-140	4		20
Dibenzo(a,h)anthracene	77		84		40-140	9		20
Indeno(1,2,3-cd)pyrene	73		78		40-140	7		20
Pyrene	80		81		40-140	1		20
2-Methylnaphthalene	69		77		40-140	11		20
Pentachlorophenol	87		97		30-130	11		20
Hexachlorobenzene	75		76		40-140	1		20
Hexachloroethane	64		73		40-140	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 20-24 Batch: WG1488688-2 WG1488688-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	72		103		15-110
Phenol-d6	63		89		15-110
Nitrobenzene-d5	96		107		30-130
2-Fluorobiphenyl	70		77		30-130
2,4,6-Tribromophenol	106		109		15-110
4-Terphenyl-d14	83		84		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 04-14 Batch: WG1488931-2 WG1488931-3								
1,4-Dioxane	105		110		40-140	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	57		49		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 15-18,20-24 Batch: WG1488989-2 WG1488989-3								
1,4-Dioxane	105		106		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	59		60		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,13,18-19,24 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample												
Perfluorooctanesulfonamide (FOSA)	ND	36.1	30.3F	84		33.0F	90		46-170	9		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	361	390	108		417	113		10-185	7		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	361	427	118		414	113		10-202	3		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	361	361	100		361	98		10-209	0		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	361	357	99		390	106		66-176	9		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	49		46		10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	51		51		10-189
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	55		54		10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	60		56		10-161
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		70		10-112

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,13,18-19,24 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	0.525J	36.1	38.4	106		38.5	103		67-148	0		30
Perfluoropentanoic Acid (PFPeA)	ND	36.1	38.9	108		39.2	107		63-161	1		30
Perfluorobutanesulfonic Acid (PFBS)	ND	32	36.5	114		37.2	114		65-157	2		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	33.8	41.0	121		40.5	118		37-219	1		30
Perfluorohexanoic Acid (PFHxA)	0.443J	36.1	39.9	111		39.8	107		69-168	0		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	33.9	31.5	93		33.5	97		52-156	6		30
Perfluoroheptanoic Acid (PFHpA)	0.382J	36.1	39.4	109		39.5	106		58-159	0		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	33	33.7	102		34.5	103		69-177	2		30
Perfluorooctanoic Acid (PFOA)	2.95	36.1	41.6	115		43.3	110		63-159	4		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	34.4	40.0	116		43.0	123		49-187	7		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	34.4	38.5	112		39.5	113		61-179	3		30
Perfluorononanoic Acid (PFNA)	ND	36.1	41.0	114		40.3	110		68-171	2		30
Perfluorooctanesulfonic Acid (PFOS)	1.36J	33.5	37.4	112		37.9	107		52-151	1		30
Perfluorodecanoic Acid (PFDA)	ND	36.1	42.0	116		40.6	110		63-171	3		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	34.6	38.6	111		37.7	107		56-173	2		30
Perfluorononanesulfonic Acid (PFNS)	ND	34.7	35.4	102		34.6	98		48-150	2		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	36.1	41.5	115		44.6	121		60-166	7		30
Perfluoroundecanoic Acid (PFUnA)	ND	36.1	43.6	121		40.2	109		60-153	8		30
Perfluorodecanesulfonic Acid (PFDS)	ND	34.8	36.7	105		37.2	105		38-156	1		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	36.1	36.6	101		36.4	99		45-170	1		30
Perfluorododecanoic Acid (PFDoA)	ND	36.1	35.6	99		37.1	101		67-153	4		30
Perfluorotridecanoic Acid (PFTrDA)	ND	36.1	44.0	122		44.8	122		48-158	2		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,13,18-19,24 QC Batch ID: WG1486508-3 WG1486508-4 QC Sample: L2118722-06 Client ID: MS Sample												
Perfluorotetradecanoic Acid (PFTA)	ND	36.1	41.6	115		41.8	114		59-182	0		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	722	867	120		678	92		57-162	24		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	34.1	36.8	108		36.8	106		69-143	0		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	36.1	33.6	93		31.5	86		40-167	6		30
Perfluorooctadecanoic Acid (PFODA)	ND	36.1	34.7	96		39.5F	107		10-119	13		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	34.9	44.2	126		45.5	128		85-154	3		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	34.8	34.2	98		36.1	102		81-188	5		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	33.6	28.4	84		28.2	82		55-158	1		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	34.1	26.4	78		25.6	74		52-156	3		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	142		159		10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	103		110		12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**158**	Q	**160**	Q	14-147
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	74		88		10-165
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86		80		27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	73		74		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	84		87		55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	84		87		62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77		79		57-129

Matrix Spike Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab   Associated sample(s): 02,13,18-19,24   QC Batch ID: WG1486508-3 WG1486508-4   QC Sample: L2118722-06   Client ID: MS Sample

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		83		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	99		100		71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	95		92		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	92		92		22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	120		114		10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	88		93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	78		82		62-163
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		94		69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		89		62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	82		84		59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	81		85		70-131

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 04-18 QC Batch ID: WG1488186-4 WG1488186-5 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
1,2,4-Trichlorobenzene	ND	18.2	10	55		13	72		40-140	**26**	Q	20
Bis(2-chloroethyl)ether	ND	18.2	9.5	52		12	66		40-140	**23**	Q	20
1,2-Dichlorobenzene	ND	18.2	9.8	54		12	66		40-140	20		20
1,3-Dichlorobenzene	ND	18.2	9.6	53		12	66		40-140	**22**	Q	20
1,4-Dichlorobenzene	ND	18.2	9.5	52		12	66		40-140	**23**	Q	20
3,3'-Dichlorobenzidine	ND	18.2	9.0	50		11	61		40-140	20		20
2,4-Dinitrotoluene	ND	18.2	13	72		17	94		40-140	**27**	Q	20
2,6-Dinitrotoluene	ND	18.2	14	77		18	99		40-140	**25**	Q	20
Azobenzene	ND	18.2	9.0	50		12	66		40-140	**29**	Q	20
4-Bromophenyl phenyl ether	ND	18.2	12	66		15	83		40-140	**22**	Q	20
Bis(2-chloroisopropyl)ether	ND	18.2	11	61		14	77		40-140	**24**	Q	20
Bis(2-chloroethoxy)methane	ND	18.2	9.6	53		12	66		40-140	**22**	Q	20
Isophorone	ND	18.2	9.4	52		12	66		40-140	**24**	Q	20
Nitrobenzene	ND	18.2	13	72		17	94		40-140	**27**	Q	20
Bis(2-ethylhexyl)phthalate	ND	18.2	12	66		16	88		40-140	**29**	Q	20
Butyl benzyl phthalate	ND	18.2	13	72		18	99		40-140	**32**	Q	20
Di-n-butylphthalate	ND	18.2	11	61		15	83		40-140	**31**	Q	20
Di-n-octylphthalate	ND	18.2	13	72		17	94		40-140	**27**	Q	20
Diethyl phthalate	ND	18.2	11	61		15	83		40-140	**31**	Q	20
Dimethyl phthalate	ND	18.2	12	66		16	88		40-140	**29**	Q	20
Aniline	ND	18.2	6.0	**33**	Q	8.6	47		40-140	**36**	Q	20
4-Chloroaniline	ND	18.2	7.4	41		9.0	50		40-140	20		20
Dibenzofuran	ND	18.2	11	61		14	77		40-140	**24**	Q	20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 04-18 QC Batch ID: WG1488186-4 WG1488186-5 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
Acetophenone	12	18.2	20	44		26	77		40-140	**26**	Q	20
2,4,6-Trichlorophenol	ND	18.2	14	77		17	94		30-130	19		20
2-Chlorophenol	ND	18.2	11	61		14	77		30-130	**24**	Q	20
2,4-Dichlorophenol	ND	18.2	13	72		16	88		30-130	**21**	Q	20
2,4-Dimethylphenol	ND	18.2	10	55		14	77		30-130	**33**	Q	20
2-Nitrophenol	ND	18.2	15	83		20	110		30-130	**29**	Q	20
4-Nitrophenol	ND	18.2	11	61		15	83		30-130	**31**	Q	20
2,4-Dinitrophenol	ND	18.2	20	110		25	**140**	Q	30-130	**22**	Q	20
Phenol	77	18.2	77	**0**	Q	100	130		30-130	**26**	Q	20
2-Methylphenol	ND	18.2	9.8	54		14	77		30-130	**35**	Q	20
3-Methylphenol/4-Methylphenol	ND	18.2	11	61		15	83		30-130	**31**	Q	20
2,4,5-Trichlorophenol	ND	18.2	14	77		17	94		30-130	19		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	101		**136**	Q	15-110
2-Fluorobiphenyl	62		76		30-130
2-Fluorophenol	63		83		15-110
4-Terphenyl-d14	67		89		30-130
Nitrobenzene-d5	63		80		30-130
Phenol-d6	51		66		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 04-18 QC Batch ID: WG1488187-4 WG1488187-5 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
Acenaphthene	ND	18.2	14	77		14	77		40-140	0		20
2-Chloronaphthalene	ND	18.2	14	77		14	77		40-140	0		20
Fluoranthene	ND	18.2	15	83		15	83		40-140	0		20
Hexachlorobutadiene	ND	18.2	14	77		13	72		40-140	7		20
Naphthalene	ND	18.2	13	72		13	72		40-140	0		20
Benzo(a)anthracene	0.04J	18.2	13	72		14	77		40-140	7		20
Benzo(a)pyrene	0.06J	18.2	13	72		14	77		40-140	7		20
Benzo(b)fluoranthene	0.10	18.2	13	72		14	77		40-140	7		20
Benzo(k)fluoranthene	0.05J	18.2	16	88		16	88		40-140	0		20
Chrysene	0.03J	18.2	16	88		17	94		40-140	6		20
Acenaphthylene	ND	18.2	14	77		13	72		40-140	7		20
Anthracene	ND	18.2	14	77		14	77		40-140	0		20
Benzo(ghi)perylene	0.10J	18.2	14	77		15	83		40-140	7		20
Fluorene	ND	18.2	14	77		15	83		40-140	7		20
Phenanthrene	ND	18.2	14	77		14	77		40-140	0		20
Dibenzo(a,h)anthracene	0.02J	18.2	15	83		16	88		40-140	6		20
Indeno(1,2,3-cd)pyrene	0.10	18.2	13	72		14	77		40-140	7		20
Pyrene	ND	18.2	15	83		16	88		40-140	6		20
2-Methylnaphthalene	ND	18.2	13	72		13	72		40-140	0		20
Pentachlorophenol	ND	18.2	14	77		13	72		30-130	7		20
Hexachlorobenzene	ND	18.2	14	77		14	77		40-140	0		20
Hexachloroethane	ND	18.2	12	66		12	66		40-140	0		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 04-18 QC Batch ID: WG1488187-4 WG1488187-5 QC Sample: L2119025-12 Client ID: BEW-3-04142021												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	**111**	Q	110		15-110
2-Fluorobiphenyl	79		76		30-130
2-Fluorophenol	64		65		15-110
4-Terphenyl-d14	88		89		30-130
Nitrobenzene-d5	99		99		30-130
Phenol-d6	60		62		15-110

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 04-14 QC Batch ID: WG1488931-4 WG1488931-5 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
1,4-Dioxane	37.9	4.63	43.6	123		44.3	138		30-140	2		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		49		15-110

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-01
Client ID: MW-SD13-04132021
Sample Location: CONCORD, MA
Date Collected: 04/13/21 16:00
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:26	44,353.2	MR
Nitrogen, Nitrate	0.87		mg/l	0.10	0.023	1	-	04/15/21 07:26	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.107		mg/l	0.050	0.013	1	-	04/25/21 17:24	44,300.0	SH
Chloride	22.4		mg/l	0.500	0.083	1	-	04/25/21 17:23	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/25/21 17:23	44,300.0	SH
Sulfate	15.7		mg/l	1.00	0.454	1	-	04/25/21 17:23	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-02
Client ID: MW-BS03-04132021
Sample Location: CONCORD, MA

Date Collected: 04/13/21 15:55
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Alkalinity, Bicarbonate	250.		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:27	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/15/21 07:27	44,353.2	MR
Phosphorus, Total	0.105		mg/l	0.010	0.004	1	04/21/21 08:30	04/21/21 13:30	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/15/21 07:10	121,4500P-E	AW
Dissolved Organic Carbon	0.79	J	mg/l	1.0	0.04	1	-	04/26/21 06:44	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.136		mg/l	0.050	0.013	1	-	04/25/21 17:35	44,300.0	SH
Chloride	9.92		mg/l	0.500	0.083	1	-	04/25/21 17:34	44,300.0	SH
Fluoride	0.110		mg/l	0.050	0.037	1	-	04/25/21 17:34	44,300.0	SH
Sulfate	74.1		mg/l	1.00	0.454	1	-	04/25/21 17:34	44,300.0	SH

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-04
Date Collected: 04/14/21 08:50
Client ID: HA20-CMT-512-04142021
Date Received: 04/14/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.026	J	mg/l	0.050	0.014	1	-	04/15/21 08:03	44,353.2	MR
Nitrogen, Nitrate	3.1		mg/l	0.10	0.023	1	-	04/15/21 08:03	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-05
Client ID: MW-SD30-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 09:05
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:16	44,353.2	MR
Nitrogen, Nitrate	1.4		mg/l	0.10	0.023	1	-	04/15/21 08:16	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-06
Client ID: MW-SD06-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 09:10
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:15	44,353.2	MR
Nitrogen, Nitrate	3.9		mg/l	0.10	0.023	1	-	04/15/21 08:15	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-07
Client ID: MW-SM13-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 09:50
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:17	44,353.2	MR
Nitrogen, Nitrate	2.3		mg/l	0.10	0.023	1	-	04/15/21 08:17	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.167		mg/l	0.050	0.013	1	-	04/25/21 17:46	44,300.0	SH
Chloride	36.2		mg/l	0.500	0.083	1	-	04/25/21 17:45	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/25/21 17:45	44,300.0	SH
Sulfate	27.7		mg/l	1.00	0.454	1	-	04/25/21 17:45	44,300.0	SH

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119025

Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-08
Client ID: MW-S11-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 10:20
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:10	44,353.2	MR
Nitrogen, Nitrate	0.036	J	mg/l	0.10	0.023	1	-	04/15/21 08:10	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-09
Client ID: MW-SD27-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 11:15
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:21	44,353.2	MR
Nitrogen, Nitrate	2.1		mg/l	0.10	0.023	1	-	04/15/21 08:21	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-10
Client ID: HB-10S-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 11:30
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	0.026	J	mg/l	0.050	0.014	1	-	04/15/21 08:20	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/15/21 08:20	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-11
Client ID: HA20-CMT-6S-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 11:20
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Alkalinity, Bicarbonate	28.2		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:30	44,353.2	MR
Nitrogen, Nitrate	4.3		mg/l	0.10	0.023	1	-	04/15/21 07:30	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/21/21 08:30	04/21/21 13:31	121,4500P-E	SD
Phosphorus, Orthophosphate	0.005		mg/l	0.005	0.001	1	-	04/15/21 17:59	121,4500P-E	AS
Dissolved Organic Carbon	0.40	J	mg/l	1.0	0.04	1	-	04/26/21 06:44	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.182		mg/l	0.050	0.013	1	-	04/25/21 17:57	44,300.0	SH
Chloride	74.1		mg/l	5.00	0.839	10	-	04/25/21 20:31	44,300.0	SH
Fluoride	0.041	J	mg/l	0.050	0.037	1	-	04/25/21 17:56	44,300.0	SH
Sulfate	16.9		mg/l	1.00	0.454	1	-	04/25/21 17:56	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-12
Client ID: BEW-3-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 10:30
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Alkalinity, Bicarbonate	195.		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:43	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/15/21 07:43	44,353.2	MR
Phosphorus, Total	0.007	J	mg/l	0.010	0.004	1	04/21/21 08:30	04/21/21 13:32	121,4500P-E	SD
Phosphorus, Orthophosphate	0.003	J	mg/l	0.005	0.001	1	-	04/15/21 17:59	121,4500P-E	AS
Dissolved Organic Carbon	1.1		mg/l	1.0	0.04	1	-	04/26/21 06:44	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/25/21 17:11	44,300.0	SH
Chloride	12.3		mg/l	0.500	0.083	1	-	04/25/21 17:12	44,300.0	SH
Fluoride	0.088		mg/l	0.050	0.037	1	-	04/25/21 17:12	44,300.0	SH
Sulfate	219.		mg/l	10.0	4.54	10	-	04/25/21 20:20	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-13
Client ID: EQ BLANK1-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 13:00
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/22/21 12:10	121,2320B	JB
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/22/21 12:10	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:53	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/15/21 08:02	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/21/21 08:30	04/21/21 13:38	121,4500P-E	SD
Phosphorus, Orthophosphate	0.003	J	mg/l	0.005	0.001	1	-	04/15/21 18:00	121,4500P-E	AS
Dissolved Organic Carbon	0.21	J	mg/l	1.0	0.04	1	-	04/26/21 06:44	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/25/21 21:38	44,300.0	SH
Chloride	0.139	J	mg/l	0.500	0.083	1	-	04/25/21 21:37	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/25/21 21:37	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/25/21 21:37	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-14
Client ID: P-1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 09:15
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:19	44,353.2	MR
Nitrogen, Nitrate	1.9		mg/l	0.10	0.023	1	-	04/15/21 08:19	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-15
Client ID: P-2-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 11:10
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:06	44,353.2	MR
Nitrogen, Nitrate	2.4		mg/l	0.10	0.023	1	-	04/15/21 08:06	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-16
Client ID: P-3-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 12:45
Date Received: 04/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:08	44,353.2	MR
Nitrogen, Nitrate	1.9		mg/l	0.10	0.023	1	-	04/15/21 08:08	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-17 Date Collected: 04/14/21 13:30
Client ID: PW-6-04142021 Date Received: 04/14/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:01	44,353.2	MR
Nitrogen, Nitrate	1.7		mg/l	0.10	0.023	1	-	04/15/21 08:01	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-18 | Date Collected: 04/14/21 13:55
Client ID: MW-S27-04142021 | Date Received: 04/14/21
Sample Location: CONCORD, MA | Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:59	44,353.2	MR
Nitrogen, Nitrate	2.6		mg/l	0.10	0.023	1	-	04/15/21 07:59	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-20
Client ID: HBPZ-2R-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 14:30
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Alkalinity, Bicarbonate	26.1		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:49	44,353.2	MR
Nitrogen, Nitrate	2.9		mg/l	0.10	0.023	1	-	04/15/21 07:49	44,353.2	MR
Phosphorus, Total	0.005	J	mg/l	0.010	0.004	1	04/21/21 08:30	04/21/21 13:39	121,4500P-E	SD
Phosphorus, Orthophosphate	0.004	J	mg/l	0.005	0.001	1	-	04/15/21 18:01	121,4500P-E	AS
Dissolved Organic Carbon	0.64	J	mg/l	1.0	0.04	1	-	04/26/21 06:44	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/25/21 18:08	44,300.0	SH
Chloride	40.0		mg/l	0.500	0.083	1	-	04/25/21 18:07	44,300.0	SH
Fluoride	0.083		mg/l	0.050	0.037	1	-	04/25/21 18:07	44,300.0	SH
Sulfate	23.2		mg/l	1.00	0.454	1	-	04/25/21 18:07	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-21
Client ID: HA20-CMT-6I-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 14:05
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Alkalinity, Bicarbonate	86.7		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:50	44,353.2	MR
Nitrogen, Nitrate	0.062	J	mg/l	0.10	0.023	1	-	04/15/21 07:50	44,353.2	MR
Phosphorus, Total	0.036		mg/l	0.010	0.004	1	04/21/21 08:30	04/21/21 13:40	121,4500P-E	SD
Phosphorus, Orthophosphate	0.003	J	mg/l	0.005	0.001	1	-	04/15/21 18:01	121,4500P-E	AS
Dissolved Organic Carbon	2.9		mg/l	2.0	0.08	2	-	04/26/21 06:44	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	ND		mg/l	0.050	0.013	1	-	04/25/21 18:19	44,300.0	SH
Chloride	63.7		mg/l	5.00	0.839	10	-	04/25/21 20:42	44,300.0	SH
Fluoride	0.206		mg/l	0.050	0.037	1	-	04/25/21 18:18	44,300.0	SH
Sulfate	59.4		mg/l	10.0	4.54	10	-	04/25/21 20:42	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-22
Client ID: MW-S01-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 13:40
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Alkalinity, Bicarbonate	42.4		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:52	44,353.2	MR
Nitrogen, Nitrate	4.1		mg/l	0.10	0.023	1	-	04/15/21 07:52	44,353.2	MR
Phosphorus, Total	0.030		mg/l	0.010	0.004	1	04/21/21 08:30	04/21/21 13:41	121,4500P-E	SD
Phosphorus, Orthophosphate	0.025		mg/l	0.005	0.001	1	-	04/15/21 18:02	121,4500P-E	AS
Dissolved Organic Carbon	0.57	J	mg/l	1.0	0.04	1	-	04/26/21 06:44	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.248		mg/l	0.050	0.013	1	-	04/25/21 19:38	44,300.0	SH
Chloride	65.4		mg/l	5.00	0.839	10	-	04/26/21 22:22	44,300.0	SH
Fluoride	0.189		mg/l	0.050	0.037	1	-	04/26/21 19:45	44,300.0	SH
Sulfate	12.3		mg/l	1.00	0.454	1	-	04/26/21 19:45	44,300.0	SH

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-23
Client ID: MW-S01-04142021 DUP
Sample Location: CONCORD, MA
Date Collected: 04/14/21 13:45
Date Received: 04/14/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Alkalinity, Bicarbonate	41.4		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 07:58	44,353.2	MR
Nitrogen, Nitrate	4.0		mg/l	0.10	0.023	1	-	04/15/21 08:07	44,353.2	MR
Phosphorus, Total	0.032		mg/l	0.010	0.004	1	04/21/21 08:30	04/21/21 13:42	121,4500P-E	SD
Phosphorus, Orthophosphate	0.025		mg/l	0.005	0.001	1	-	04/15/21 18:02	121,4500P-E	AS
Dissolved Organic Carbon	0.60	J	mg/l	1.0	0.04	1	-	04/26/21 06:44	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Bromide	0.172		mg/l	0.050	0.013	1	-	04/25/21 19:49	44,300.0	SH
Chloride	69.8		mg/l	5.00	0.839	10	-	04/25/21 21:26	44,300.0	SH
Fluoride	0.184		mg/l	0.050	0.037	1	-	04/25/21 19:48	44,300.0	SH
Sulfate	14.1		mg/l	1.00	0.454	1	-	04/25/21 19:48	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2119025
Project Number: 3252H | **Report Date:** 05/25/21

SAMPLE RESULTS

Lab ID: L2119025-24 | Date Collected: 04/14/21 16:05
Client ID: HB-10-04142021 | Date Received: 04/14/21
Sample Location: CONCORD, MA | Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 08:05	44,353.2	MR
Nitrogen, Nitrate	0.63		mg/l	0.10	0.023	1	-	04/15/21 08:05	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02,04-11 Batch: WG1486414-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/15/21 05:01	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-02,04-11 Batch: WG1486415-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 05:03	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 12-18,20-22 Batch: WG1486416-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/15/21 05:01	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 12-18,20-22 Batch: WG1486417-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 05:03	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 23-24 Batch: WG1486418-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/15/21 04:52	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 23-24 Batch: WG1486419-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/15/21 04:49	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1486482-1										
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/15/21 07:09	121,4500P-E	AW
General Chemistry - Westborough Lab for sample(s): 11-13,20-23 Batch: WG1486808-4										
Phosphorus, Orthophosphate	0.001	J	mg/l	0.005	0.001	1	-	04/15/21 17:57	121,4500P-E	AS
General Chemistry - Westborough Lab for sample(s): 02,11-13,20-23 Batch: WG1488802-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/21/21 08:30	04/21/21 13:27	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 02,11-12,20-23 Batch: WG1488991-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 02,11-12,20-23 Batch: WG1488992-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/21/21 13:30	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 13 Batch: WG1489458-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/22/21 12:10	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 13 Batch: WG1489460-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/22/21 12:10	121,2320B	JB
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02,07,11-13,20-21,23 Batch: WG1490523-1										
Chloride	0.137	J	mg/l	0.500	0.083	1	-	04/25/21 13:23	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/25/21 13:23	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/25/21 13:23	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2119025
Project Number: 3252H **Report Date:** 05/25/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 02,11-13,20-23 Batch: WG1490574-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	04/26/21 06:44	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 22 Batch: WG1491001-1										
Chloride	0.209	J	mg/l	0.500	0.083	1	-	04/26/21 18:33	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/26/21 18:33	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/26/21 18:33	44,300.0	SH
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02,07,11,13,20-23 Batch: WG1502300-1										
Bromide	ND		mg/l	0.050	0.013	1	-	04/25/21 13:23	44,300.0	SH
Anions by Ion Chromatography - Westborough Lab for sample(s): 12 Batch: WG1503283-1										
Bromide	0.049	J	mg/l	0.050	0.013	1	-	04/25/21 13:01	44,300.0	SH

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02,04-11 Batch: WG1486414-2								
Nitrogen, Nitrate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02,04-11 Batch: WG1486415-2								
Nitrogen, Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 12-18,20-22 Batch: WG1486416-2								
Nitrogen, Nitrate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 12-18,20-22 Batch: WG1486417-2								
Nitrogen, Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 23-24 Batch: WG1486418-2								
Nitrogen, Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 23-24 Batch: WG1486419-2								
Nitrogen, Nitrate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1486482-2								
Phosphorus, Orthophosphate	97		-		90-110	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 11-13,20-23 Batch: WG1486808-5					
Phosphorus, Orthophosphate	95	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 02,11-13,20-23 Batch: WG1488802-2					
Phosphorus, Total	97	-	80-120	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02,07,11-13,20-21,23 Batch: WG1490523-2					
Chloride	100	-	90-110	-	
Fluoride	100	-	90-110	-	
Sulfate	99	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 02,11-13,20-23 Batch: WG1490574-2					
Dissolved Organic Carbon	100	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 22 Batch: WG1491001-2					
Chloride	103	-	90-110	-	
Fluoride	98	-	90-110	-	
Sulfate	102	-	90-110	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02,07,11,13,20-23 Batch: WG1502300-2					
Bromide	94	-	90-110	-	

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2119025
Project Number: 3252H
Report Date: 05/25/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 12 Batch: WG1503283-2					
Bromide	92	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02,04-11 QC Batch ID: WG1486414-4 QC Sample: L2119025-11 Client ID: HA20-CMT-6S-04142021												
Nitrogen, Nitrate	4.3	4	8.2	98		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01-02,04-11 QC Batch ID: WG1486415-4 QC Sample: L2119025-11 Client ID: HA20-CMT-6S-04142021												
Nitrogen, Nitrite	ND	4	4.1	102		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 12-18,20-22 QC Batch ID: WG1486416-4 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
Nitrogen, Nitrate	ND	4	3.9	98		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 12-18,20-22 QC Batch ID: WG1486417-4 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
Nitrogen, Nitrite	ND	4	4.2	105		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1486482-4 QC Sample: L2119025-02 Client ID: MW-BS03-04132021												
Phosphorus, Orthophosphate	ND	0.5	0.510	102		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 11-13,20-23 QC Batch ID: WG1486808-7 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
Phosphorus, Orthophosphate	0.003J	0.5	0.488	98		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,11-13,20-23 QC Batch ID: WG1488802-3 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
Phosphorus, Total	0.007J	0.5	0.498	100		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery		Recovery Limits	RPD		RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02,07,11-13,20-21,23 QC Batch ID: WG1490523-3 WG1490523-4 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
Chloride	12.3	4	15.8	**88**	Q	15.8	**81**	Q	90-110	9		18
Fluoride	0.088	0.4	0.516	107		0.504	104		90-110	3		15
Sulfate	219.	80	282	**79**	Q	284	**81**	Q	90-110	1		20
General Chemistry - Westborough Lab Associated sample(s): 02,11-13,20-23 QC Batch ID: WG1490574-4 QC Sample: L2119025-12 Client ID: BEW-3-04142021												
Dissolved Organic Carbon	1.1	4	5.4	109		-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02,04-11 QC Batch ID: WG1486414-3 QC Sample: L2119025-11 Client ID: HA20-CMT-6S-04142021						
Nitrogen, Nitrate	4.3	4.3	mg/l	0		6
General Chemistry - Westborough Lab Associated sample(s): 01-02,04-11 QC Batch ID: WG1486415-3 QC Sample: L2119025-11 Client ID: HA20-CMT-6S-04142021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 12-18,20-22 QC Batch ID: WG1486416-3 QC Sample: L2119025-12 Client ID: BEW-3-04142021						
Nitrogen, Nitrate	ND	ND	mg/l	NC		6
General Chemistry - Westborough Lab Associated sample(s): 12-18,20-22 QC Batch ID: WG1486417-3 QC Sample: L2119025-12 Client ID: BEW-3-04142021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1486482-3 QC Sample: L2119025-02 Client ID: MW-BS03-04132021						
Phosphorus, Orthophosphate	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 11-13,20-23 QC Batch ID: WG1486808-6 QC Sample: L2119025-12 Client ID: BEW-3-04142021						
Phosphorus, Orthophosphate	0.003J	0.003J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,11-13,20-23 QC Batch ID: WG1488802-4 QC Sample: L2119025-12 Client ID: BEW-3-04142021						
Phosphorus, Total	0.007J	0.017	mg/l	NC		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,11-12,20-23 QC Batch ID: WG1488991-2 QC Sample: L2119025-12 Client ID: BEW-3-04142021					
Alkalinity, Bicarbonate	195.	189	mg CaCO3/L	3	9
General Chemistry - Westborough Lab Associated sample(s): 02,11-12,20-23 QC Batch ID: WG1488992-2 QC Sample: L2119025-12 Client ID: BEW-3-04142021					
Alkalinity, Carbonate	ND	ND	mg CaCO3/L	NC	10
General Chemistry - Westborough Lab Associated sample(s): 02,11-13,20-23 QC Batch ID: WG1490574-3 QC Sample: L2119025-12 Client ID: BEW-3-04142021					
Dissolved Organic Carbon	1.1	1.1	mg/l	0	20

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent
E	Absent
F	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-01A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-01B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-01C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-01D	Plastic 120ml unpreserved	E	7	7	3.2	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-01E	Plastic 250ml unpreserved	E	7	7	3.2	Y	Absent		SO4-300(28),CL-300(28),F-300(28)
L2119025-01F	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-01G	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-01H	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-01I	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-02A	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-02B	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-02C	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-02D	Vial H2SO4 preserved	A	NA		3.7	Y	Absent		DOC-9060(28)
L2119025-02E	Vial H2SO4 preserved	A	NA		3.7	Y	Absent		DOC-9060(28)
L2119025-02F	Vial H2SO4 preserved	A	NA		3.7	Y	Absent		DOC-9060(28)
L2119025-02G	Plastic 250ml unpreserved/No Headspace	A	NA		3.7	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-02H	Plastic 250ml H2SO4 preserved	A	<2	<2	3.7	Y	Absent		TPHOS-4500(28)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-02J	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-02K	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-02L	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-02M	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-02N	Plastic 500ml unpreserved	A	7	7	3.7	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2119025-02O	Plastic 250ml unpreserved	C	NA		2.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2119025-02P	Plastic 250ml unpreserved	C	NA		2.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2119025-03A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-03B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-04A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-04B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-04C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-04D	Plastic 120ml unpreserved	A	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-04E	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-04F	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-04G	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-04H	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-05A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-05B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-05C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-05D	Plastic 120ml unpreserved	E	7	7	3.2	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-05E	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-05F	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-05G	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-05H	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-06A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-06B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-06C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-06D	Plastic 120ml unpreserved	A	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-06E	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-06F	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-06G	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-06H	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-07A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-07B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-07C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-07D	Plastic 120ml unpreserved	E	7	7	3.2	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-07E	Plastic 250ml unpreserved	E	7	7	3.2	Y	Absent		SO4-300(28),F-300(28),CL-300(28)
L2119025-07F	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-07G	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-07H	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-07I	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-08A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-08B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-08C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-08D	Plastic 120ml unpreserved	E	7	7	3.2	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-08E	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-08F	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-08G	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-08H	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-09A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-09B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-09C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-09D	Plastic 120ml unpreserved	E	7	7	3.2	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-09E	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-09F	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-09G	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-09H	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-10A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-10B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-10C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-10D	Plastic 120ml unpreserved	E	7	7	3.2	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-10E	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-10F	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-10G	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-10H	Amber 250ml unpreserved	E	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-11A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-11B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-11C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-11D	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-11E	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-11F	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-11G	Plastic 250ml unpreserved/No Headspace	D	NA		3.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-11H	Plastic 250ml H2SO4 preserved	D	<2	<2	3.0	Y	Absent		TPHOS-4500(28)
L2119025-11J	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-11K	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-11L	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-11M	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-11N	Plastic 500ml unpreserved	D	7	7	3.0	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2119025-12A	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-12A1	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-12A2	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-12A3	Vial HCl preserved	NA	NA			Y	Absent		HOLD-8260(14)
L2119025-12B	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119025

Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-12B1	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-12B2	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-12C	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-12C1	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-12C2	Vial HCl preserved	A	NA		3.7	Y	Absent		HOLD-8260(14)
L2119025-12D	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-12D1	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-12D2	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-12E	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-12E1	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-12E2	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-12F	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-12F1	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-12F2	Vial H2SO4 preserved	D	NA		3.0	Y	Absent		DOC-9060(28)
L2119025-12G	Plastic 120ml unpreserved	D	7	7	3.0	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-12G1	Plastic 120ml unpreserved	D	7	7	3.0	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-12G2	Plastic 120ml unpreserved	D	7	7	3.0	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-12H	Plastic 250ml unpreserved/No Headspace	D	NA		3.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-12H1	Plastic 250ml unpreserved/No Headspace	D	NA		3.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-12H2	Plastic 250ml unpreserved/No Headspace	D	NA		3.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-12I	Plastic 250ml H2SO4 preserved	D	<2	<2	3.0	Y	Absent		TPHOS-4500(28)
L2119025-12I1	Plastic 250ml H2SO4 preserved	D	<2	<2	3.0	Y	Absent		TPHOS-4500(28)
L2119025-12I2	Plastic 250ml H2SO4 preserved	D	<2	<2	3.0	Y	Absent		TPHOS-4500(28)
L2119025-12J	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-12J1	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-12J2	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-12K	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-12K1	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-12K2	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-12L	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-12L1	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-12L2	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-12M	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-12M1	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-12M2	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-12N	Plastic 500ml unpreserved	D	7	7	3.0	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28)
L2119025-12N1	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28)
L2119025-12N2	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28)
L2119025-13A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-13B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-13C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-13D	Vial H2SO4 preserved	F	NA		4.4	Y	Absent		DOC-9060(28)
L2119025-13E	Vial H2SO4 preserved	F	NA		4.4	Y	Absent		DOC-9060(28)
L2119025-13F	Vial H2SO4 preserved	F	NA		4.4	Y	Absent		DOC-9060(28)
L2119025-13G	Plastic 120ml unpreserved	F	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-13H	Plastic 250ml unpreserved/No Headspace	F	NA		4.4	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-13I	Plastic 250ml H2SO4 preserved	F	<2	<2	4.4	Y	Absent		TPHOS-4500(28)
L2119025-13J	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-13K	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-13L	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-13M	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-13N	Plastic 250ml unpreserved	F	7	7	4.4	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28)
L2119025-13O	Plastic 250ml unpreserved	C	NA		2.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2119025-13P	Plastic 250ml unpreserved	C	NA		2.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2119025-14A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-14B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-14C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-14D	Plastic 120ml unpreserved	F	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-14E	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-14F	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-14G	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-14H	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-15A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-15B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-15C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-15D	Plastic 120ml unpreserved	F	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-15E	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-15F	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-15G	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-15H	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-16A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-16B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-16C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-16D	Plastic 120ml unpreserved	F	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-16E	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-16F	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-16G	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-16H	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-17A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-17B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-17C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-17D	Plastic 120ml unpreserved	D	7	7	3.0	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-17E	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-17F	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-17G	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-17H	Amber 250ml unpreserved	D	7	7	3.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-18A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-18B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-18C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-18D	Plastic 120ml unpreserved	F	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-18E	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-18F	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-18G	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-18H	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-18J	Plastic 250ml unpreserved	C	NA		2.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2119025-18K	Plastic 250ml unpreserved	C	NA		2.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2119025-19A	Plastic 250ml unpreserved	C	NA		2.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2119025-20A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-20B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-20C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-20D	Vial H2SO4 preserved	B	NA		2.8	Y	Absent		DOC-9060(28)
L2119025-20E	Vial H2SO4 preserved	B	NA		2.8	Y	Absent		DOC-9060(28)
L2119025-20F	Vial H2SO4 preserved	B	NA		2.8	Y	Absent		DOC-9060(28)
L2119025-20G	Plastic 250ml unpreserved/No Headspace	B	NA		2.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-20H	Plastic 250ml H2SO4 preserved	B	<2	<2	2.8	Y	Absent		TPHOS-4500(28)
L2119025-20J	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-20K	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-20L	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-20M	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-20N	Plastic 500ml unpreserved	B	7	7	2.8	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2119025-21A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-21B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-21C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-21D	Vial H2SO4 preserved	B	NA		2.8	Y	Absent		DOC-9060(28)
L2119025-21E	Vial H2SO4 preserved	B	NA		2.8	Y	Absent		DOC-9060(28)
L2119025-21F	Vial H2SO4 preserved	B	NA		2.8	Y	Absent		DOC-9060(28)
L2119025-21G	Plastic 250ml unpreserved/No Headspace	B	NA		2.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-21H	Plastic 250ml H2SO4 preserved	B	<2	<2	2.8	Y	Absent		TPHOS-4500(28)
L2119025-21J	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-21K	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-21L	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-21M	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-21N	Plastic 500ml unpreserved	B	7	7	2.8	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2119025-22A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-22B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-22C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-22D	Vial H2SO4 preserved	B	NA		2.8	Y	Absent		DOC-9060(28)
L2119025-22E	Vial H2SO4 preserved	B	NA		2.8	Y	Absent		DOC-9060(28)
L2119025-22F	Vial H2SO4 preserved	B	NA		2.8	Y	Absent		DOC-9060(28)
L2119025-22H	Plastic 250ml unpreserved/No Headspace	B	NA		2.8	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-22I	Plastic 250ml H2SO4 preserved	B	<2	<2	2.8	Y	Absent		TPHOS-4500(28)
L2119025-22J	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-22K	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-22L	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-22M	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-22N	Plastic 500ml unpreserved	B	7	7	2.8	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2119025-23A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-23B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-23C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119025
Report Date: 05/25/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119025-23D	Vial H2SO4 preserved	F	NA		4.4	Y	Absent		DOC-9060(28)
L2119025-23E	Vial H2SO4 preserved	F	NA		4.4	Y	Absent		DOC-9060(28)
L2119025-23F	Vial H2SO4 preserved	F	NA		4.4	Y	Absent		DOC-9060(28)
L2119025-23G	Plastic 250ml unpreserved/No Headspace	F	NA		4.4	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119025-23H	Plastic 250ml H2SO4 preserved	F	<2	<2	4.4	Y	Absent		TPHOS-4500(28)
L2119025-23I	Plastic 120ml unpreserved	F	7	7	4.4	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-23J	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-23K	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-23L	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-23M	Amber 250ml unpreserved	F	7	7	4.4	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-23N	Plastic 250ml unpreserved	F	7	7	4.4	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28)
L2119025-24A	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-24B	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-24C	Vial HCl preserved	A	NA		3.7	Y	Absent		MCP-8260-10(14)
L2119025-24D	Plastic 120ml unpreserved	A	7	7	3.7	Y	Absent		NO2-353(2),NO3-353(2)
L2119025-24E	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-24F	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119025-24G	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-24H	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119025-24J	Plastic 250ml unpreserved	C	NA		2.3	Y	Absent		A2-537-ISOTOPE-36(14)
L2119025-24K	Plastic 250ml unpreserved	C	NA		2.3	Y	Absent		A2-537-ISOTOPE-36(14)

*Values in parentheses indicate holding time in days

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name: NUCLEAR METALS **Lab Number:** L2119025

Project Number: 3252H **Report Date:** 05/25/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/14/21

ALPHA Job #: L2119025

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
19025 -01	MW-SD13-04132021	4/13/21	16:00	GW	SAL	X	X	X	X				X						9
-02	MW-BS03-04132021	4/13/21	15:55	GW	ZM	X	X	X	X	X	X	X	X	X	X				16
-03	Trip Blank1-04142021	3/30/21	—	TB	PC	X													2
-04	HA20-CMT-5I2-04142021	4/14/21	8:50	GW	ELL	X	X	X	X										8
-05	MW-SD30-04142021	4/14/21	9:05	GW	FHM	X	X	X	X										8
-06	MW-SD06-04142021	4/14/21	9:10	GW	RM	X	X	X	X										8
-07	MW-SM13-04142021	4/14/21	9:50	GW	CF	X	X	X	X				X						9
-08	MW-S11-04142021	4/14/21	10:20	GW	PB	X	X	X	X										8
-09	MW-SD27-04142021	4/14/21	11:15	GW	FHM	X	X	X	X										8
-10	HB-10S-04142021	4/14/21	11:30	GW	RM	X	X	X	X										8
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	D	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
	4/14/21 16:39		4/14/21 16:??
	4/14/21 17:4?	Catherine Gordon	4/14/21 1740

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

ALPHA ANALYTICAL World Class Chemistry

CHAIN OF CUSTODY

Date Rec'd in Lab: 4/14/21

ALPHA Job #: L2119025

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Project Information

Project Name: Nuclear Metals
Project Location: Concord, MA
Project #: 3252H
Project Manager: Nathan Hunt
ALPHA Quote #:

Client Information

Client: de maximis, inc.
Address: 200 Day Hill Road
Windsor, CT
Phone: 978-793-7163
Fax:
Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
19025 -11	HA20-CMT-6S-04142021	4/14/21	11:20	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-12	BEW-3-04142021	4/14/21	10:30	GW	ZM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	MS/MSD	45
-13	EQ Blank1-04142021	4/14/21	13:00	GW	NH	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
-14	P-1-04142021	4/14/21	9:15	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-15	P-2-01142021	4/14/21	11:10	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-16	P-3-04142021	4/14/21	12:45	GW	DAP	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-17	PW-6-04142021	4/14/21	13:30	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
-18	MW-S27-04142021	4/14/21	13:55	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
-19	Field Blank1-04142021	4/14/21	14:00	GW	FHM	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐		3
-20	HBPZ-2R-04142021	4/14/21	14:30	GW	RM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/14/21 16:39	TZ AAL	4-14-21 1639
TZ AAL	4-14-21 1740	Catherine Gordon	4/14/21 1740

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

ALPHA ANALYTICAL

CHAIN OF CUSTODY

PAGE 3 OF 3

Date Rec'd in Lab:	4/14/21
ALPHA Job #:	L2119025

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Project Information

Project Name: Nuclear Metals
Project Location: Concord, MA
Project #: 3252H
Project Manager: Nathan Hunt
ALPHA Quote #:

Client Information

Client: de maximis, inc.
Address: 200 Day Hill Road
Windsor, CT
Phone: 978-793-7163
Fax:
Email: ahoffmann@demaximis.com
☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
19025-21	HA20-CMT-6I-04142021	4/14/21	14:05	GW	ELL	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-22	MW-S01-04142021	4/14/21	13:40	GW	CF	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-23	MW-S01-04142021DUP	4/14/21	13:45	GW	CF	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-24	HB-10-04142021	4/14/21	16:05	GW	FHM	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		10
Container Type						V	A	A	P	P	P	V	P	P	P	-	-		
Preservative						B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/14/21 1637	[signature]	4/14/21 1630
[signature] AAL	4/14/21 1741	Catherine Gordon	4/14/21 1740

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119025**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487778-5**	**Lab File ID**	**: J210418A05**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/18/21 04:39**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487778-3LCS	WG1487778-3	04/18/21 03:17
WG1487778-4LCSD	WG1487778-4	04/18/21 03:58
TRIP BLANK1-04142021	L2119025-03	04/18/21 08:47

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119025**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1490642-5**	**Lab File ID**	**: J210426A05**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/26/21 03:41**

Client Sample No.	Lab Sample ID	Analysis Date
WG1490642-3LCS	WG1490642-3	04/26/21 02:17
WG1490642-4LCSD	WG1490642-4	04/26/21 02:59
MW-SD13-04132021	L2119025-01	04/26/21 10:33

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119025**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1491082-5**	**Lab File ID**	**: VQ210427A05**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/27/21 04:57**

Client Sample No.	Lab Sample ID	Analysis Date
WG1491082-3LCS	WG1491082-3	04/27/21 03:27
WG1491082-4LCSD	WG1491082-4	04/27/21 03:57
HB-10-04142021	L2119025-24	04/27/21 10:59
MW-S01-04142021 DUP	L2119025-23	04/27/21 11:29

Method Blank Summary
Form 4
Volatiles

Client	: **de maximis, inc.**	**Lab Number**	: **L2119025**
Project Name	: **NUCLEAR METALS**	**Project Number**	: **3252H**
Lab Sample ID	: **WG1491093-5**	**Lab File ID**	: **J210427A06**
Instrument ID	: **JACK**		
Matrix	: **WATER**	**Analysis Date**	: **04/27/21 06:04**

Client Sample No.	Lab Sample ID	Analysis Date
WG1491093-3LCS	WG1491093-3	04/27/21 04:42
WG1491093-4LCSD	WG1491093-4	04/27/21 05:23
HA20-CMT-512-04142021	L2119025-04	04/27/21 10:11
MW-SM13-04142021	L2119025-07	04/27/21 12:14
MW-S11-04142021	L2119025-08	04/27/21 12:55
MW-SD27-04142021	L2119025-09	04/27/21 13:36
HA20-CMT-6S-04142021	L2119025-11	04/27/21 14:58
EQ BLANK1-04142021	L2119025-13	04/27/21 15:39

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119025**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1491117-5**	**Lab File ID**	**: J210427A07**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/27/21 06:25**

Client Sample No.	Lab Sample ID	Analysis Date
WG1491117-3LCS	WG1491117-3	04/27/21 05:03
WG1491117-4LCSD	WG1491117-4	04/27/21 05:44
P-1-04142021	L2119025-14	04/27/21 08:28
P-2-04142021	L2119025-15	04/27/21 09:09
P-3-04142021	L2119025-16	04/27/21 09:50
PW-6-04142021	L2119025-17	04/27/21 10:31
HBPZ-2R-04142021	L2119025-20	04/27/21 11:54
HA20-CMT-6I-04142021	L2119025-21	04/27/21 12:35
MW-S01-04142021	L2119025-22	04/27/21 13:16

Method Blank Summary
Form 4
Volatiles

Client	: **de maximis, inc.**		**Lab Number**	: **L2119025**
Project Name	: **NUCLEAR METALS**		**Project Number**	: **3252H**
Lab Sample ID	: **WG1491733-5**		**Lab File ID**	: **VQ210428A04**
Instrument ID	: **QUIMBY**			
Matrix	: **WATER**		**Analysis Date**	: **04/28/21 05:37**

Client Sample No.	Lab Sample ID	Analysis Date
WG1491733-3LCS	WG1491733-3	04/28/21 04:07
WG1491733-4LCSD	WG1491733-4	04/28/21 04:37
MW-SD30-04142021	L2119025-05	04/28/21 06:37
MW-SD06-04142021	L2119025-06	04/28/21 07:07
HB-10S-04142021	L2119025-10	04/28/21 07:37
MW-S27-04142021	L2119025-18	04/28/21 08:07

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/18/21 03:17	
Lab File ID	: J210418A01	Init. Calib. Date(s)	: 04/06/21	04/06/21
Sample No	: WG1487778-2	Init. Calib. Times	: 06:51	15:03
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	74	0
Dichlorodifluoromethane	1.063	1.159	-	-9	20	73	0
Chloromethane	1.777	2.314	-	-30.2*	20	83	0
Vinyl chloride	2.131	2.369	-	-11.2	20	72	0
Bromomethane	10	9.598	-	4	20	64	0
Chloroethane	1.132	1.421	-	-25.5*	20	78	0
Trichlorofluoromethane	1.963	2.217	-	-12.9	20	76	0
Ethyl ether	0.811	0.866	-	-6.8	20	74	0
1,1-Dichloroethene	1.225	1.325	-	-8.2	20	74	0
Carbon disulfide	4.134	4.812	-	-16.4	20	78	0
Freon-113	1.249	1.442	-	-15.5	20	79	0
Acrolein	0.195	0.212	-	-8.7	20	74	0
Methylene chloride	1.42	1.701	-	-19.8	20	80	0
Acetone	0.421	0.582	-	-38.2*	20	92	0
trans-1,2-Dichloroethene	1.295	1.433	-	-10.7	20	77	0
Methyl acetate	1.123	1.488	-	-32.5*	20	94	0
Methyl tert-butyl ether	3.731	3.748	-	-0.5	20	75	0
tert-Butyl alcohol	0.112	0.127	-	-13.4	20	89	0
Diisopropyl ether	5.416	6.354	-	-17.3	20	83	0
1,1-Dichloroethane	3.15	3.865	-	-22.7*	20	81	0
Halothane	0.935	1.076	-	-15.1	20	80	0
Acrylonitrile	0.54	0.69	-	-27.8*	20	85	0
Ethyl tert-butyl ether	4.546	4.837	-	-6.4	20	79	0
Vinyl acetate	3.97	4.528	-	-14.1	20	85	0
cis-1,2-Dichloroethene	1.495	1.634	-	-9.3	20	75	0
2,2-Dichloropropane	2.269	2.607	-	-14.9	20	82	0
Bromochloromethane	0.579	0.664	-	-14.7	20	81	0
Cyclohexane	3.039	3.58	-	-17.8	20	79	0
Chloroform	2.689	3.062	-	-13.9	20	78	0
Ethyl acetate	1.446	1.759	-	-21.6*	20	91	0
Carbon tetrachloride	1.62	1.835	-	-13.3	20	78	0
Tetrahydrofuran	0.434	0.549	-	-26.5*	20	83	0
Dibromofluoromethane	0.243	0.249	-	-2.5	20	78	0
1,1,1-Trichloroethane	2.087	2.306	-	-10.5	20	76	0
2-Butanone	0.63	0.791	-	-25.6*	20	92	0
1,1-Dichloropropene	2.06	2.23	-	-8.3	20	74	0
Benzene	6.094	6.81	-	-11.7	20	79	0
tert-Amyl methyl ether	3.752	3.554	-	5.3	20	71	0
1,2-Dichloroethane-d4	0.4	0.415	-	-3.7	20	77	0
1,2-Dichloroethane	2.172	2.549	-	-17.4	20	80	0
Methyl cyclohexane	2.718	2.852	-	-4.9	20	74	0
Trichloroethene	1.386	1.515	-	-9.3	20	77	0
Dibromomethane	0.835	0.916	-	-9.7	20	78	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/18/21 03:17
Lab File ID	: J210418A01	Init. Calib. Date(s)	: 04/06/21 04/06/21
Sample No	: WG1487778-2	Init. Calib. Times	: 06:51 15:03
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	1.734	1.948	-	-12.3	20	79	0
2-Chloroethyl vinyl ether	0.93	0.82	-	11.8	20	65	0
Bromodichloromethane	2.051	2.265	-	-10.4	20	78	0
1,4-Dioxane	0.011	0.012*	-	-9.1	20	81	0
cis-1,3-Dichloropropene	2.48	2.694	-	-8.6	20	78	0
Chlorobenzene-d5	1	1	-	0	20	69	0
Toluene-d8	1.295	1.323	-	-2.2	20	68	0
Toluene	4.665	5.107	-	-9.5	20	72	0
4-Methyl-2-pentanone	0.633	0.65	-	-2.7	20	75	0
Tetrachloroethene	1.509	1.705	-	-13	20	83	0
trans-1,3-Dichloropropene	2.822	3.297	-	-16.8	20	78	0
Ethyl methacrylate	2.319	2.27	-	2.1	20	67	0
1,1,2-Trichloroethane	1.359	1.571	-	-15.6	20	79	0
Chlorodibromomethane	1.446	1.617	-	-11.8	20	81	0
1,3-Dichloropropane	2.89	3.358	-	-16.2	20	80	0
1,2-Dibromoethane	1.36	1.532	-	-12.6	20	80	0
2-Hexanone	1.159	1.328	-	-14.6	20	77	0
Chlorobenzene	4.762	5.231	-	-9.8	20	75	0
Ethylbenzene	9.087	10.254	-	-12.8	20	72	0
1,1,1,2-Tetrachloroethane	1.447	1.615	-	-11.6	20	80	0
p/m Xylene	3.498	3.924	-	-12.2	20	73	0
o Xylene	3.305	3.664	-	-10.9	20	71	0
Styrene	5.661	6.569	-	-16	20	74	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	78	0
Bromoform	10	9.159	-	8.4	20	84	0
Isopropylbenzene	17.237	16.407	-	4.8	20	71	0
4-Bromofluorobenzene	1.006	0.864	-	14.1	20	68	0
Bromobenzene	3.515	3.403	-	3.2	20	84	0
n-Propylbenzene	23.158	23.88	-	-3.1	20	75	0
1,4-Dichlorobutane	6.223	6.886	-	-10.7	20	81	0
1,1,2,2-Tetrachloroethane	10	11.243	-	-12.4	20	82	0
4-Ethyltoluene	16.64	16.762	-	-0.7	20	75	0
2-Chlorotoluene	15.112	15.412	-	-2	20	75	0
1,3,5-Trimethylbenzene	14.217	14.283	-	-0.5	20	76	0
1,2,3-Trichloropropane	3.239	3.511	-	-8.4	20	79	0
trans-1,4-Dichloro-2-buten	1.298	1.46	-	-12.5	20	78	0
4-Chlorotoluene	13.612	13.677	-	-0.5	20	74	0
tert-Butylbenzene	11.914	11.664	-	2.1	20	74	0
1,2,4-Trimethylbenzene	13.724	13.66	-	0.5	20	76	0
sec-Butylbenzene	17.277	17.662	-	-2.2	20	74	0
p-Isopropyltoluene	14.39	14.572	-	-1.3	20	75	0
1,3-Dichlorobenzene	7.305	7.394	-	-1.2	20	79	0
1,4-Dichlorobenzene	7.308	7.349	-	-0.6	20	81	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2119025		
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H		
Instrument ID	: JACK	**Calibration Date**	: 04/18/21 03:17		
Lab File ID	: J210418A01	**Init. Calib. Date(s)**	: 04/06/21	04/06/21	
Sample No	: WG1487778-2	**Init. Calib. Times**	: 06:51	15:03	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	8.273	8.13	-	1.7	20	76	0
n-Butylbenzene	14.883	15.819	-	-6.3	20	78	0
1,2-Dichlorobenzene	6.648	6.68	-	-0.5	20	80	0
1,2,4,5-Tetramethylbenzene	10.716	9.35	-	12.7	20	73	0
1,2-Dibromo-3-chloropropan	0.466	0.457	-	1.9	20	84	0
1,3,5-Trichlorobenzene	4.04	4.158	-	-2.9	20	91	0
Hexachlorobutadiene	10	11.321	-	-13.2	20	94	0
1,2,4-Trichlorobenzene	10	10.103	-	-1	20	84	0
Naphthalene	8.515	8.186	-	3.9	20	80	0
1,2,3-Trichlorobenzene	2.936	3.001	-	-2.2	20	89	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/26/21 02:17
Lab File ID	: J210426A01	Init. Calib. Date(s)	: 04/20/21 04/20/21
Sample No	: WG1490642-2	Init. Calib. Times	: 06:07 12:57
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	105	0
Dichlorodifluoromethane	1.542	1.304	-	15.4	20	78	0
Chloromethane	2.252	1.952	-	13.3	20	86	0
Vinyl chloride	1.971	1.674	-	15.1	20	79	0
Bromomethane	10	8.112	-	18.9	20	80	0
Chloroethane	1.198	1.11	-	7.3	20	88	0
Trichlorofluoromethane	2.788	2.625	-	5.8	20	89	0
Ethyl ether	0.889	0.907	-	-2	20	103	0
1,1-Dichloroethene	1.608	1.489	-	7.4	20	90	0
Carbon disulfide	4.761	4.355	-	8.5	20	88	0
Methylene chloride	1.728	1.668	-	3.5	20	95	0
Acetone	0.545	0.619	-	-13.6	20	115	0
trans-1,2-Dichloroethene	1.648	1.559	-	5.4	20	93	0
Methyl tert-butyl ether	4.021	4.418	-	-9.9	20	117	0
Diisopropyl ether	6.261	6.237	-	0.4	20	105	0
1,1-Dichloroethane	3.488	3.165	-	9.3	20	88	0
Ethyl tert-butyl ether	4.857	5.074	-	-4.5	20	109	0
cis-1,2-Dichloroethene	1.889	1.784	-	5.6	20	93	-.01
2,2-Dichloropropane	2.736	2.565	-	6.3	20	96	0
Bromochloromethane	0.897	0.863	-	3.8	20	94	0
Chloroform	3.289	3.022	-	8.1	20	88	0
Carbon tetrachloride	2.644	2.403	-	9.1	20	90	0
Tetrahydrofuran	0.539	0.62	-	-15	20	115	0
Dibromofluoromethane	0.29	0.274	-	5.5	20	105	0
1,1,1-Trichloroethane	2.893	2.672	-	7.6	20	91	0
2-Butanone	0.765	0.927	-	-21.2*	20	123	0
1,1-Dichloropropene	2.301	2.257	-	1.9	20	97	0
Benzene	6.631	6.319	-	4.7	20	96	0
tert-Amyl methyl ether	3.944	4.051	-	-2.7	20	111	0
1,2-Dichloroethane-d4	0.391	0.353	-	9.7	20	101	0
1,2-Dichloroethane	2.572	2.464	-	4.2	20	97	0
Trichloroethene	1.748	1.706	-	2.4	20	96	0
Dibromomethane	1.104	1.068	-	3.3	20	100	0
1,2-Dichloropropane	1.79	1.717	-	4.1	20	99	0
Bromodichloromethane	2.457	2.302	-	6.3	20	94	0
1,4-Dioxane	0.012	0.018*	-	-50*	20	158	0
cis-1,3-Dichloropropene	2.784	2.767	-	0.6	20	101	0
Chlorobenzene-d5	1	1	-	0	20	99	0
Toluene-d8	1.15	1.183	-	-2.9	20	101	0
Toluene	4.965	4.782	-	3.7	20	91	0
4-Methyl-2-pentanone	0.596	0.652	-	-9.4	20	115	0
Tetrachloroethene	2.321	2.378	-	-2.5	20	98	0
trans-1,3-Dichloropropene	10	10.411	-	-4.1	20	104	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/26/21 02:17	
Lab File ID	: J210426A01	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1490642-2	Init. Calib. Times	: 06:07	12:57
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	1.356	1.485	-	-9.5	20	107	0
Chlorodibromomethane	1.961	2.099	-	-7	20	105	0
1,3-Dichloropropane	2.782	3.045	-	-9.5	20	106	0
1,2-Dibromoethane	1.63	1.815	-	-11.3	20	108	0
2-Hexanone	1.263	1.424	-	-12.7	20	111	0
Chlorobenzene	5.757	5.688	-	1.2	20	95	0
Ethylbenzene	9.387	9.582	-	-2.1	20	90	0
1,1,1,2-Tetrachloroethane	1.992	2.061	-	-3.5	20	104	0
p/m Xylene	3.789	3.875	-	-2.3	20	89	0
o Xylene	3.595	3.669	-	-2.1	20	91	0
Styrene	20	19.805	-	1	20	90	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	101	0
Bromoform	2.359	2.425	-	-2.8	20	114	0
Isopropylbenzene	17.473	15.868	-	9.2	20	89	0
4-Bromofluorobenzene	0.8	0.768	-	4	20	100	0
Bromobenzene	4.366	4.073	-	6.7	20	97	0
n-Propylbenzene	21.642	19.867	-	8.2	20	87	0
1,1,2,2-Tetrachloroethane	3.387	3.456	-	-2	20	105	0
2-Chlorotoluene	14.23	13.262	-	6.8	20	88	0
1,3,5-Trimethylbenzene	14.552	13.594	-	6.6	20	91	0
1,2,3-Trichloropropane	3.058	3.036	-	0.7	20	104	0
4-Chlorotoluene	13.04	12.082	-	7.3	20	91	0
tert-Butylbenzene	12.872	12.237	-	4.9	20	91	0
1,2,4-Trimethylbenzene	13.954	13.303	-	4.7	20	94	0
sec-Butylbenzene	17.612	16.669	-	5.4	20	90	0
p-Isopropyltoluene	10	9.158	-	8.4	20	92	0
1,3-Dichlorobenzene	8.882	8.453	-	4.8	20	94	0
1,4-Dichlorobenzene	8.812	8.335	-	5.4	20	94	0
n-Butylbenzene	14.08	13.908	-	1.2	20	94	0
1,2-Dichlorobenzene	8.245	7.817	-	5.2	20	96	0
1,2-Dibromo-3-chloropropan	0.605	0.681	-	-12.6	20	115	0
Hexachlorobutadiene	2.239	2.386	-	-6.6	20	106	0
1,2,4-Trichlorobenzene	4.502	4.638	-	-3	20	111	0
Naphthalene	10.045	10.296	-	-2.5	20	113	0
1,2,3-Trichlorobenzene	4.247	4.351	-	-2.4	20	110	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119025**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Instrument ID	**: QUIMBY**	**Calibration Date**	**: 04/27/21 03:27**
Lab File ID	**: VQ210427A02**	**Init. Calib. Date(s)**	**: 04/11/21 04/11/21**
Sample No	**: WG1491082-2**	**Init. Calib. Times**	**: 16:44 21:47**
Channel	**:**		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	90	0
Dichlorodifluoromethane	0.715	0.728	-	-1.8	20	85	0
Chloromethane	1.089	1.171	-	-7.5	20	92	0
Vinyl chloride	0.844	0.929	-	-10.1	20	92	0
Bromomethane	0.461	0.426	-	7.6	20	79	0
Chloroethane	0.521	0.534	-	-2.5	20	87	0
Trichlorofluoromethane	1.198	1.266	-	-5.7	20	90	0
Ethyl ether	0.275	0.285	-	-3.6	20	91	0
1,1-Dichloroethene	0.654	0.627	-	4.1	20	83	0
Carbon disulfide	1.842	1.792	-	2.7	20	84	0
Freon-113	0.676	0.68	-	-0.6	20	83	0
Methylene chloride	0.709	0.735	-	-3.7	20	89	0
Acetone	10	11.872	-	-18.7	20	107	0
trans-1,2-Dichloroethene	0.781	0.767	-	1.8	20	84	0
Methyl acetate	0.359	0.429	-	-19.5	20	108	-.01
Methyl tert-butyl ether	1.417	1.539	-	-8.6	20	97	0
tert-Butyl alcohol	0.032	0.034*	-	-6.3	20	100	0
Diisopropyl ether	2.883	3.416	-	-18.5	20	104	0
1,1-Dichloroethane	1.547	1.662	-	-7.4	20	92	0
Halothane	0.653	0.619	-	5.2	20	81	0
Acrylonitrile	0.149	0.175	-	-17.4	20	104	0
Ethyl tert-butyl ether	2.062	2.34	-	-13.5	20	100	-.01
Vinyl acetate	1.554	1.89	-	-21.6*	20	107	-.01
cis-1,2-Dichloroethene	0.828	0.821	-	0.8	20	85	0
2,2-Dichloropropane	1.253	1.413	-	-12.8	20	97	-.01
Bromochloromethane	0.339	0.334	-	1.5	20	84	0
Cyclohexane	1.756	1.858	-	-5.8	20	93	0
Chloroform	1.426	1.492	-	-4.6	20	91	0
Ethyl acetate	0.479	0.567	-	-18.4	20	105	0
Carbon tetrachloride	1.277	1.335	-	-4.5	20	89	0
Tetrahydrofuran	0.171	0.2	-	-17	20	106	0
Dibromofluoromethane	0.291	0.284	-	2.4	20	87	0
1,1,1-Trichloroethane	1.461	1.512	-	-3.5	20	89	0
2-Butanone	0.19	0.225	-	-18.4	20	102	-.01
1,1-Dichloropropene	1.115	1.187	-	-6.5	20	92	0
Benzene	3.027	3.196	-	-5.6	20	89	0
tert-Amyl methyl ether	1.521	1.611	-	-5.9	20	94	0
1,2-Dichloroethane-d4	0.282	0.308	-	-9.2	20	102	0
1,2-Dichloroethane	0.858	1.004	-	-17	20	102	-.01
Methyl cyclohexane	1.55	1.555	-	-0.3	20	87	-.01
Trichloroethene	0.896	0.857	-	4.4	20	85	0
Dibromomethane	0.344	0.354	-	-2.9	20	88	0
1,2-Dichloropropane	0.753	0.815	-	-8.2	20	93	-.01

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/27/21 03:27
Lab File ID	: VQ210427A02	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1491082-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Bromodichloromethane	0.987	1.054	-	-6.8	20	93	0
1,4-Dioxane	0.00307	0.00306*	-	0.3	20	89	0
cis-1,3-Dichloropropene	1.059	1.188	-	-12.2	20	98	0
Chlorobenzene-d5	1	1	-	0	20	86	-.01
Toluene-d8	1.077	1.096	-	-1.8	20	88	-.01
Toluene	1.629	1.683	-	-3.3	20	84	-.01
4-Methyl-2-pentanone	10	9.962	-	0.4	20	97	0
Tetrachloroethene	0.709	0.666	-	6.1	20	77	0
trans-1,3-Dichloropropene	0.736	0.832	-	-13	20	96	-.01
Ethyl methacrylate	10	9.813	-	1.9	20	93	0
1,1,2-Trichloroethane	0.325	0.354	-	-8.9	20	91	-.01
Chlorodibromomethane	0.512	0.522	-	-2	20	86	0
1,3-Dichloropropane	0.692	0.754	-	-9	20	92	0
1,2-Dibromoethane	0.368	0.385	-	-4.6	20	89	-.01
2-Hexanone	10	10.53	-	-5.3	20	103	0
Chlorobenzene	1.757	1.748	-	0.5	20	82	-.01
Ethylbenzene	3.145	3.368	-	-7.1	20	84	-.01
1,1,1,2-Tetrachloroethane	0.626	0.634	-	-1.3	20	84	0
p/m Xylene	20	19.788	-	1.1	20	85	-.02
o Xylene	20	20.15	-	-0.7	20	86	-.02
Styrene	20	20.304	-	-1.5	20	87	-.01
1,4-Dichlorobenzene-d4	1	1	-	0	20	97	0
Bromoform	0.517	0.463	-	10.4	20	83	-.01
Isopropylbenzene	6.172	5.889	-	4.6	20	83	-.01
4-Bromofluorobenzene	0.997	0.94	-	5.7	20	91	0
Bromobenzene	1.257	1.095	-	12.9	20	79	-.01
n-Propylbenzene	6.845	7.289	-	-6.5	20	96	0
1,4-Dichlorobutane	1.486	1.563	-	-5.2	20	96	0
1,1,2,2-Tetrachloroethane	0.764	0.736	-	3.7	20	88	0
4-Ethyltoluene	5.065	5.606	-	-10.7	20	102	-.01
2-Chlorotoluene	4.764	4.88	-	-2.4	20	93	-.01
1,3,5-Trimethylbenzene	3.876	4.852	-	-25.2*	20	117	-.01
1,2,3-Trichloropropane	0.635	0.663	-	-4.4	20	96	0
trans-1,4-Dichloro-2-buten	0.258	0.284	-	-10.1	20	106	0
4-Chlorotoluene	4.01	4.315	-	-7.6	20	99	-.01
tert-Butylbenzene	4.263	4.278	-	-0.4	20	91	-.01
1,2,4-Trimethylbenzene	3.462	4.567	-	-31.9*	20	122	0
sec-Butylbenzene	5.424	5.682	-	-4.8	20	95	0
p-Isopropyltoluene	10	10.446	-	-4.5	20	107	0
1,3-Dichlorobenzene	2.441	2.395	-	1.9	20	90	0
1,4-Dichlorobenzene	2.306	2.32	-	-0.6	20	94	0
p-Diethylbenzene	2.449	2.818	-	-15.1	20	114	0
n-Butylbenzene	10	12.213	-	-22.1*	20	123	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119025**		
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**		
Instrument ID	**: QUIMBY**	**Calibration Date**	**: 04/27/21 03:27**		
Lab File ID	**: VQ210427A02**	**Init. Calib. Date(s)**	**: 04/11/21**	**04/11/21**	
Sample No	**: WG1491082-2**	**Init. Calib. Times**	**: 16:44**	**21:47**	
Channel	**:**				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichlorobenzene	2.108	2.086	-	1	20	90	0
1,2,4,5-Tetramethylbenzene	2.863	3.175	-	-10.9	20	87	0
1,2-Dibromo-3-chloropropan	0.11	0.09	-	18.2	20	75	0
1,3,5-Trichlorobenzene	1.16	1.385	-	-19.4	20	111	0
Hexachlorobutadiene	0.787	0.611	-	22.4*	20	75	0
1,2,4-Trichlorobenzene	0.939	1.007	-	-7.2	20	106	0
Naphthalene	1.416	1.435	-	-1.3	20	93	0
1,2,3-Trichlorobenzene	0.783	0.867	-	-10.7	20	100	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/27/21 04:42
Lab File ID	: J210427A02	Init. Calib. Date(s)	: 04/20/21 04/20/21
Sample No	: WG1491093-2	Init. Calib. Times	: 06:28 13:17
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	76	0
Dichlorodifluoromethane	1.718	1.615	-	6	20	71	0
Chloromethane	2.239	2.583	-	-15.4	20	89	-.02
Vinyl chloride	2.099	2.215	-	-5.5	20	80	0
Bromomethane	10	12.157	-	-21.6*	20	86	0
Chloroethane	1.236	1.377	-	-11.4	20	85	0
Trichlorofluoromethane	2.886	3.483	-	-20.7*	20	90	0
Ethyl ether	0.988	1.047	-	-6	20	86	0
1,1-Dichloroethene	1.62	1.897	-	-17.1	20	88	0
Carbon disulfide	4.976	5.894	-	-18.4	20	93	0
Freon-113	1.756	2.131	-	-21.4*	20	90	-.01
Iodomethane	10	10.365	-	-3.7	20	108	0
Acrolein	0.256	0.249	-	2.7	20	80	-.01
Methylene chloride	1.895	2.168	-	-14.4	20	93	0
Acetone	10	10.451	-	-4.5	20	84	-.01
trans-1,2-Dichloroethene	1.744	2.03	-	-16.4	20	92	-.01
Methyl acetate	1.686	1.743	-	-3.4	20	85	0
Methyl tert-butyl ether	4.666	4.742	-	-1.6	20	82	0
tert-Butyl alcohol	0.162	0.151	-	6.8	20	80	-.01
Diisopropyl ether	7.013	7.115	-	-1.5	20	83	-.01
1,1-Dichloroethane	3.687	4.187	-	-13.6	20	88	0
Halothane	1.455	1.752	-	-20.4*	20	94	-.01
Acrylonitrile	0.743	0.814	-	-9.6	20	88	0
Ethyl tert-butyl ether	5.545	5.702	-	-2.8	20	85	0
Vinyl acetate	5.398	5.735	-	-6.2	20	88	0
cis-1,2-Dichloroethene	1.984	2.304	-	-16.1	20	90	0
2,2-Dichloropropane	2.857	3.387	-	-18.6	20	94	0
Bromochloromethane	0.938	1.108	-	-18.1	20	91	-.01
Cyclohexane	3.438	4.064	-	-18.2	20	88	0
Chloroform	3.496	4.012	-	-14.8	20	95	0
Ethyl acetate	2.26	2.245	-	0.7	20	82	0
Carbon tetrachloride	2.608	3.287	-	-26*	20	93	0
Tetrahydrofuran	0.702	0.7	-	0.3	20	82	-.02
Dibromofluoromethane	0.274	0.293	-	-6.9	20	83	0
1,1,1-Trichloroethane	3.004	3.607	-	-20.1*	20	92	0
2-Butanone	1.019	1.061	-	-4.1	20	88	0
1,1-Dichloropropene	2.493	2.892	-	-16	20	88	0
Benzene	7.147	8.16	-	-14.2	20	88	-.01
tert-Amyl methyl ether	4.722	4.457	-	5.6	20	83	0
1,2-Dichloroethane-d4	0.39	0.387	-	0.8	20	81	0
1,2-Dichloroethane	2.743	3.126	-	-14	20	91	0
Methyl cyclohexane	3.393	3.544	-	-4.5	20	82	0
Trichloroethene	1.946	2.206	-	-13.4	20	88	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/27/21 04:42	
Lab File ID	: J210427A02	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1491093-2	Init. Calib. Times	: 06:28	13:17
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	1.192	1.3	-	-9.1	20	89	0
1,2-Dichloropropane	1.988	2.191	-	-10.2	20	90	0
2-Chloroethyl vinyl ether	10	8.901	-	11	20	79	0
Bromodichloromethane	2.635	3.008	-	-14.2	20	91	0
1,4-Dioxane	0.018	0.019*	-	-5.6	20	89	-.02
cis-1,3-Dichloropropene	3.055	3.423	-	-12	20	88	0
Chlorobenzene-d5	1	1	-	0	20	81	0
Toluene-d8	1.158	1.107	-	4.4	20	76	0
Toluene	5.622	5.73	-	-1.9	20	88	0
4-Methyl-2-pentanone	10	8.752	-	12.5	20	80	0
Tetrachloroethene	2.601	2.874	-	-10.5	20	93	0
trans-1,3-Dichloropropene	3.254	3.423	-	-5.2	20	87	0
Ethyl methacrylate	2.644	2.439	-	7.8	20	82	0
1,1,2-Trichloroethane	1.582	1.683	-	-6.4	20	88	0
Chlorodibromomethane	2.288	2.396	-	-4.7	20	92	0
1,3-Dichloropropane	3.34	3.377	-	-1.1	20	86	0
1,2-Dibromoethane	1.93	1.993	-	-3.3	20	88	0
2-Hexanone	1.669	1.397	-	16.3	20	77	0
Chlorobenzene	6.368	6.918	-	-8.6	20	90	0
Ethylbenzene	10.067	11.582	-	-15	20	88	0
1,1,1,2-Tetrachloroethane	2.308	2.43	-	-5.3	20	90	0
p/m Xylene	4.037	4.744	-	-17.5	20	90	0
o Xylene	20	21.192	-	-6	20	88	0
Styrene	20	22.269	-	-11.3	20	91	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	79	0
Bromoform	2.777	2.849	-	-2.6	20	89	0
Isopropylbenzene	18.605	20.329	-	-9.3	20	88	0
4-Bromofluorobenzene	0.806	0.793	-	1.6	20	78	0
Bromobenzene	4.765	5.141	-	-7.9	20	92	0
n-Propylbenzene	22.882	25.554	-	-11.7	20	88	0
1,4-Dichlorobutane	6.578	6.532	-	0.7	20	85	0
1,1,2,2-Tetrachloroethane	10	11.017	-	-10.2	20	89	0
4-Ethyltoluene	17.854	20.154	-	-12.9	20	89	0
2-Chlorotoluene	15.287	17.113	-	-11.9	20	90	0
1,3,5-Trimethylbenzene	15.64	17.253	-	-10.3	20	88	0
1,2,3-Trichloropropane	3.625	3.788	-	-4.5	20	87	0
trans-1,4-Dichloro-2-buten	1.546	1.615	-	-4.5	20	91	0
4-Chlorotoluene	13.902	15.361	-	-10.5	20	91	0
tert-Butylbenzene	13.881	15.17	-	-9.3	20	88	0
1,2,4-Trimethylbenzene	15.244	16.655	-	-9.3	20	88	0
sec-Butylbenzene	18.87	21.03	-	-11.4	20	88	0
p-Isopropyltoluene	10	10.247	-	-2.5	20	87	0
1,3-Dichlorobenzene	9.524	10.66	-	-11.9	20	93	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119025**		
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**		
Instrument ID	**: JACK**	**Calibration Date**	**: 04/27/21 04:42**		
Lab File ID	**: J210427A02**	**Init. Calib. Date(s)**	**: 04/20/21**	**04/20/21**	
Sample No	**: WG1491093-2**	**Init. Calib. Times**	**: 06:28**	**13:17**	
Channel	**:**				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	9.417	10.417	-	-10.6	20	93	0
p-Diethylbenzene	10.288	10.505	-	-2.1	20	87	0
n-Butylbenzene	15.665	17.209	-	-9.9	20	87	0
1,2-Dichlorobenzene	8.844	9.572	-	-8.2	20	93	0
1,2,4,5-Tetramethylbenzene	10	9.231	-	7.7	20	86	0
1,2-Dibromo-3-chloropropan	0.769	0.817	-	-6.2	20	91	0
1,3,5-Trichlorobenzene	6.153	7.078	-	-15	20	96	0
Hexachlorobutadiene	2.422	2.87	-	-18.5	20	98	0
1,2,4-Trichlorobenzene	5.391	5.774	-	-7.1	20	93	0
Naphthalene	10	9.389	-	6.1	20	86	0
1,2,3-Trichlorobenzene	5.031	5.546	-	-10.2	20	94	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025		
Project Name	: NUCLEAR METALS	Project Number	: 3252H		
Instrument ID	: JACK	Calibration Date	: 04/27/21 05:03		
Lab File ID	: J210427A03	Init. Calib. Date(s)	: 04/20/21	04/20/21	
Sample No	: WG1491117-2	Init. Calib. Times	: 06:07	12:57	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	87	0
Dichlorodifluoromethane	1.542	1.552	-	-0.6	20	77	0
Chloromethane	2.252	2.384	-	-5.9	20	87	0
Vinyl chloride	1.971	2.162	-	-9.7	20	85	0
Bromomethane	10	10.376	-	-3.8	20	84	0
Chloroethane	1.198	1.359	-	-13.4	20	90	0
Trichlorofluoromethane	2.788	3.308	-	-18.7	20	93	0
Ethyl ether	0.889	1.039	-	-16.9	20	98	0
1,1-Dichloroethene	1.608	1.854	-	-15.3	20	93	0
Carbon disulfide	4.761	5.563	-	-16.8	20	94	0
Methylene chloride	1.728	2.052	-	-18.8	20	96	0
Acetone	0.545	0.616	-	-13	20	95	0
trans-1,2-Dichloroethene	1.648	1.871	-	-13.5	20	93	0
Methyl tert-butyl ether	4.021	4.355	-	-8.3	20	95	0
Diisopropyl ether	6.261	6.922	-	-10.6	20	96	0
1,1-Dichloroethane	3.488	4.163	-	-19.4	20	96	0
Ethyl tert-butyl ether	4.857	5.165	-	-6.3	20	92	0
cis-1,2-Dichloroethene	1.889	2.215	-	-17.3	20	96	0
2,2-Dichloropropane	2.736	3.267	-	-19.4	20	102	0
Bromochloromethane	0.897	1.013	-	-12.9	20	92	0
Chloroform	3.289	3.959	-	-20.4*	20	95	0
Carbon tetrachloride	2.644	2.995	-	-13.3	20	93	0
Tetrahydrofuran	0.539	0.56	-	-3.9	20	86	0
Dibromofluoromethane	0.29	0.283	-	2.4	20	90	.01
1,1,1-Trichloroethane	2.893	3.341	-	-15.5	20	95	0
2-Butanone	0.765	0.831	-	-8.6	20	91	0
1,1-Dichloropropene	2.301	2.709	-	-17.7	20	96	0
Benzene	6.631	7.566	-	-14.1	20	95	0
tert-Amyl methyl ether	3.944	4.054	-	-2.8	20	92	0
1,2-Dichloroethane-d4	0.391	0.361	-	7.7	20	86	0
1,2-Dichloroethane	2.572	2.903	-	-12.9	20	95	0
Trichloroethene	1.748	2.086	-	-19.3	20	98	0
Dibromomethane	1.104	1.229	-	-11.3	20	95	0
1,2-Dichloropropane	1.79	2.078	-	-16.1	20	100	0
Bromodichloromethane	2.457	2.812	-	-14.4	20	95	0
1,4-Dioxane	0.012	0.012*	-	0	20	85	0
cis-1,3-Dichloropropene	2.784	3.168	-	-13.8	20	96	0
Chlorobenzene-d5	1	1	-	0	20	85	0
Toluene-d8	1.15	1.135	-	1.3	20	83	0
Toluene	4.965	5.73	-	-15.4	20	93	0
4-Methyl-2-pentanone	0.596	0.625	-	-4.9	20	94	0
Tetrachloroethene	2.321	2.829	-	-21.9*	20	99	0
trans-1,3-Dichloropropene	10	11.179	-	-11.8	20	95	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2119025	
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H	
Instrument ID	: JACK	**Calibration Date**	: 04/27/21 05:03	
Lab File ID	: J210427A03	**Init. Calib. Date(s)**	: 04/20/21	04/20/21
Sample No	: WG1491117-2	**Init. Calib. Times**	: 06:07	12:57
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	1.356	1.542	-	-13.7	20	95	0
Chlorodibromomethane	1.961	2.233	-	-13.9	20	95	0
1,3-Dichloropropane	2.782	3.246	-	-16.7	20	96	0
1,2-Dibromoethane	1.63	1.856	-	-13.9	20	94	0
2-Hexanone	1.263	1.294	-	-2.5	20	86	0
Chlorobenzene	5.757	6.824	-	-18.5	20	97	0
Ethylbenzene	9.387	11.878	-	-26.5*	20	95	0
1,1,1,2-Tetrachloroethane	1.992	2.325	-	-16.7	20	100	0
p/m Xylene	3.789	4.895	-	-29.2*	20	96	0
o Xylene	3.595	4.539	-	-26.3*	20	95	0
Styrene	20	23.83	-	-19.1	20	92	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	85	0
Bromoform	2.359	2.418	-	-2.5	20	96	0
Isopropylbenzene	17.473	19.869	-	-13.7	20	94	0
4-Bromofluorobenzene	0.8	0.756	-	5.5	20	83	0
Bromobenzene	4.366	4.71	-	-7.9	20	95	0
n-Propylbenzene	21.642	25.133	-	-16.1	20	93	0
1,1,2,2-Tetrachloroethane	3.387	3.648	-	-7.7	20	94	0
2-Chlorotoluene	14.23	16.648	-	-17	20	93	0
1,3,5-Trimethylbenzene	14.552	16.694	-	-14.7	20	94	0
1,2,3-Trichloropropane	3.058	3.209	-	-4.9	20	93	0
4-Chlorotoluene	13.04	14.982	-	-14.9	20	95	0
tert-Butylbenzene	12.872	15.086	-	-17.2	20	94	0
1,2,4-Trimethylbenzene	13.954	15.709	-	-12.6	20	93	0
sec-Butylbenzene	17.612	20.381	-	-15.7	20	93	0
p-Isopropyltoluene	10	10.994	-	-9.9	20	94	0
1,3-Dichlorobenzene	8.882	10.369	-	-16.7	20	98	0
1,4-Dichlorobenzene	8.812	9.815	-	-11.4	20	94	0
n-Butylbenzene	14.08	16.183	-	-14.9	20	92	0
1,2-Dichlorobenzene	8.245	8.891	-	-7.8	20	92	0
1,2-Dibromo-3-chloropropan	0.605	0.632	-	-4.5	20	90	0
Hexachlorobutadiene	2.239	2.6	-	-16.1	20	98	0
1,2,4-Trichlorobenzene	4.502	4.835	-	-7.4	20	98	0
Naphthalene	10.045	9.919	-	1.3	20	92	0
1,2,3-Trichlorobenzene	4.247	4.548	-	-7.1	20	97	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025		
Project Name	: NUCLEAR METALS	Project Number	: 3252H		
Instrument ID	: QUIMBY	Calibration Date	: 04/28/21 04:07		
Lab File ID	: VQ210428A01	Init. Calib. Date(s)	: 04/11/21	04/11/21	
Sample No	: WG1491733-2	Init. Calib. Times	: 16:44	21:47	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	87	0
Dichlorodifluoromethane	0.715	0.651	-	9	20	73	0
Chloromethane	1.089	1.075	-	1.3	20	81	0
Vinyl chloride	0.844	0.856	-	-1.4	20	82	0
Bromomethane	0.461	0.479	-	-3.9	20	86	0
Chloroethane	0.521	0.511	-	1.9	20	80	0
Trichlorofluoromethane	1.198	1.211	-	-1.1	20	83	0
Ethyl ether	0.275	0.272	-	1.1	20	84	0
1,1-Dichloroethene	0.654	0.617	-	5.7	20	79	0
Carbon disulfide	1.842	1.752	-	4.9	20	80	0
Freon-113	0.676	0.667	-	1.3	20	79	0
Methylene chloride	0.709	0.684	-	3.5	20	80	0
Acetone	10	11.17	-	-11.7	20	98	0
trans-1,2-Dichloroethene	0.781	0.72	-	7.8	20	76	0
Methyl acetate	0.359	0.394	-	-9.7	20	96	0
Methyl tert-butyl ether	1.417	1.424	-	-0.5	20	87	0
tert-Butyl alcohol	0.032	0.031*	-	3.1	20	86	0
Diisopropyl ether	2.883	3.196	-	-10.9	20	94	0
1,1-Dichloroethane	1.547	1.564	-	-1.1	20	84	0
Halothane	0.653	0.585	-	10.4	20	74	0
Acrylonitrile	0.149	0.158	-	-6	20	90	0
Ethyl tert-butyl ether	2.062	2.173	-	-5.4	20	90	0
Vinyl acetate	1.554	1.793	-	-15.4	20	98	0
cis-1,2-Dichloroethene	0.828	0.775	-	6.4	20	78	0
2,2-Dichloropropane	1.253	1.36	-	-8.5	20	90	0
Bromochloromethane	0.339	0.314	-	7.4	20	77	0
Cyclohexane	1.756	1.792	-	-2.1	20	87	0
Chloroform	1.426	1.402	-	1.7	20	82	0
Ethyl acetate	0.479	0.535	-	-11.7	20	96	0
Carbon tetrachloride	1.277	1.254	-	1.8	20	80	0
Tetrahydrofuran	0.171	0.187	-	-9.4	20	95	0
Dibromofluoromethane	0.291	0.282	-	3.1	20	83	0
1,1,1-Trichloroethane	1.461	1.445	-	1.1	20	82	0
2-Butanone	0.19	0.214	-	-12.6	20	94	0
1,1-Dichloropropene	1.115	1.115	-	0	20	83	0
Benzene	3.027	2.985	-	1.4	20	81	0
tert-Amyl methyl ether	1.521	1.509	-	0.8	20	85	0
1,2-Dichloroethane-d4	0.282	0.315	-	-11.7	20	101	0
1,2-Dichloroethane	0.858	0.936	-	-9.1	20	92	0
Methyl cyclohexane	1.55	1.486	-	4.1	20	80	0
Trichloroethene	0.896	0.815	-	9	20	78	0
Dibromomethane	0.344	0.333	-	3.2	20	80	0
1,2-Dichloropropane	0.753	0.77	-	-2.3	20	85	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119025
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/28/21 04:07
Lab File ID	: VQ210428A01	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1491733-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Bromodichloromethane	0.987	0.981	-	0.6	20	84	0
1,4-Dioxane	0.00307	0.00271*	-	11.7	20	76	0
cis-1,3-Dichloropropene	1.059	1.1	-	-3.9	20	88	0
Chlorobenzene-d5	1	1	-	0	20	75	-.01
Toluene-d8	1.077	1.158	-	-7.5	20	82	0
Toluene	1.629	1.747	-	-7.2	20	77	0
4-Methyl-2-pentanone	10	10.285	-	-2.9	20	89	0
Tetrachloroethene	0.709	0.695	-	2	20	71	0
trans-1,3-Dichloropropene	0.736	0.841	-	-14.3	20	85	0
Ethyl methacrylate	10	9.823	-	1.8	20	82	0
1,1,2-Trichloroethane	0.325	0.359	-	-10.5	20	81	0
Chlorodibromomethane	0.512	0.53	-	-3.5	20	77	0
1,3-Dichloropropane	0.692	0.762	-	-10.1	20	82	0
1,2-Dibromoethane	0.368	0.391	-	-6.3	20	80	0
2-Hexanone	10	10.749	-	-7.5	20	93	0
Chlorobenzene	1.757	1.776	-	-1.1	20	73	0
Ethylbenzene	3.145	3.485	-	-10.8	20	76	0
1,1,1,2-Tetrachloroethane	0.626	0.647	-	-3.4	20	76	0
p/m Xylene	20	20.523	-	-2.6	20	77	-.01
o Xylene	20	20.894	-	-4.5	20	79	-.01
Styrene	20	20.809	-	-4	20	79	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	87	0
Bromoform	0.517	0.471	-	8.9	20	76	0
Isopropylbenzene	6.172	6.003	-	2.7	20	76	-.01
4-Bromofluorobenzene	0.997	0.911	-	8.6	20	79	0
Bromobenzene	1.257	1.11	-	11.7	20	72	0
n-Propylbenzene	6.845	7.514	-	-9.8	20	89	0
1,4-Dichlorobutane	1.486	1.56	-	-5	20	87	0
1,1,2,2-Tetrachloroethane	0.764	0.729	-	4.6	20	79	0
4-Ethyltoluene	5.065	5.791	-	-14.3	20	95	0
2-Chlorotoluene	4.764	4.975	-	-4.4	20	86	-.01
1,3,5-Trimethylbenzene	3.876	5.025	-	-29.6*	20	109	0
1,2,3-Trichloropropane	0.635	0.649	-	-2.2	20	85	0
trans-1,4-Dichloro-2-buten	0.258	0.277	-	-7.4	20	93	0
4-Chlorotoluene	4.01	4.417	-	-10.1	20	92	0
tert-Butylbenzene	4.263	4.46	-	-4.6	20	85	0
1,2,4-Trimethylbenzene	3.462	4.723	-	-36.4*	20	114	0
sec-Butylbenzene	5.424	5.917	-	-9.1	20	89	0
p-Isopropyltoluene	10	10.931	-	-9.3	20	101	0
1,3-Dichlorobenzene	2.441	2.452	-	-0.5	20	83	0
1,4-Dichlorobenzene	2.306	2.398	-	-4	20	88	0
p-Diethylbenzene	2.449	2.969	-	-21.2*	20	108	0
n-Butylbenzene	10	12.948	-	-29.5*	20	117	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119025**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Instrument ID	**: QUIMBY**	**Calibration Date**	**: 04/28/21 04:07**
Lab File ID	**: VQ210428A01**	**Init. Calib. Date(s)**	**: 04/11/21 04/11/21**
Sample No	**: WG1491733-2**	**Init. Calib. Times**	**: 16:44 21:47**
Channel	**:**		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichlorobenzene	2.108	2.157	-	-2.3	20	84	0
1,2,4,5-Tetramethylbenzene	2.863	3.26	-	-13.9	20	80	0
1,2-Dibromo-3-chloropropan	0.11	0.091	-	17.3	20	68	0
1,3,5-Trichlorobenzene	1.16	1.451	-	-25.1*	20	105	0
Hexachlorobutadiene	0.787	0.659	-	16.3	20	73	0
1,2,4-Trichlorobenzene	0.939	1.036	-	-10.3	20	99	0
Naphthalene	1.416	1.432	-	-1.1	20	84	0
1,2,3-Trichlorobenzene	0.783	0.894	-	-14.2	20	93	0

*** Value outside of QC limits.**

ANALYTICAL REPORT

Lab Number:	L2119379
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	3252H
Report Date:	04/29/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2119379-01	HA20-CMT-6D1-04142021	WATER	CONCORD, MA	04/14/21 16:15	04/15/21
L2119379-02	SW-2A-04142021	WATER	CONCORD, MA	04/14/21 16:15	04/15/21
L2119379-03	OW-3-04142021	WATER	CONCORD, MA	04/14/21 16:50	04/15/21
L2119379-04	GZW-6-1-04142021	WATER	CONCORD, MA	04/14/21 17:55	04/15/21
L2119379-05	TRIP BLANK1-04152021	WATER	CONCORD, MA	04/15/21 00:00	04/15/21
L2119379-06	MW-1-04152021	WATER	CONCORD, MA	04/15/21 09:10	04/15/21
L2119379-07	HB-13-04152021	WATER	CONCORD, MA	04/15/21 09:10	04/15/21
L2119379-08	MW-SD-01-04152021	WATER	CONCORD, MA	04/15/21 09:45	04/15/21
L2119379-09	HA20-CMT-2D1-04152021	WATER	CONCORD, MA	04/15/21 10:20	04/15/21
L2119379-10	MW-BS54-04152021	WATER	CONCORD, MA	04/15/21 12:50	04/15/21
L2119379-11	EQ BLANK1-04152021	WATER	CONCORD, MA	04/15/21 11:00	04/15/21
L2119379-12	MW-BS01-04152021	WATER	CONCORD, MA	04/15/21 13:45	04/15/21
L2119379-13	GZW-10-2-04152021	WATER	CONCORD, MA	04/15/21 13:05	04/15/21
L2119379-14	FIELD BLANK1-04152021	WATER	CONCORD, MA	04/15/21 13:10	04/15/21
L2119379-15	MW-BS03-04152021	WATER	CONCORD, MA	04/15/21 15:55	04/15/21
L2119379-16	GZW-11-2-04152021	WATER	CONCORD, MA	04/15/21 16:05	04/15/21

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Sample Receipt

L2119379-16: The collection date and time on the chain of custody was 15-APR-21 16:15; however, the collection date/time on the container label was 15-APR-21 16:05. At the client's request, the collection date/time is reported as 15-APR-21 16:05.

Volatile Organics

L2119379-06: Initial calibration utilized a quadratic fit for: n-butylbenzene, p-isopropyltoluene

In reference to question H:

L2119379-05: The surrogate recoveries are above the acceptance criteria for 1,2-dichloroethane-d4 (136%) and dibromofluoromethane (133%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L2119379-16: The surrogate recovery is above the acceptance criteria for dibromofluoromethane (131%). Since the sample was non-detect for all target analytes, re-analysis was not required.

The WG1487779-3/-4 LCS/LCSD recoveries, associated with L2119379-05, are above the individual acceptance criteria for acetone (140%/140%) and tetrahydrofuran (LCSD 140%), but within the overall method allowances. The results of the associated sample are reported; however, all positive detects are considered to have a potentially high bias for these compounds.

The WG1491614-3 LCS recovery, associated with L2119379-01, -02, -04, -09, -11, -13, and -15, is above the individual acceptance criteria for 1,4-dioxane (132%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for this compound.

The WG1491733-3 LCS recovery, associated with L2119379-06, is above the individual acceptance criteria

Case Narrative (continued)

for 1,2,4-trimethylbenzene (140%), but within the overall method allowances. The results of the associated sample are reported; however, all positive detects are considered to have a potentially high bias for this compound.

The WG1491617-7 MSD recoveries, performed on L2119379-07, are outside the acceptance criteria for carbon tetrachloride (140%) and trichloroethene (140%); however, the associated LCS/LCSD recoveries are within overall method allowances. No further action was required.

The WG1491617-6/-7 MS/MSD RPDs, performed on L2119379-07, are outside the acceptance criteria for methylene chloride (21%), carbon tetrachloride (24%), 1,2-dichloropropane (21%), 1,1-dichloropropene (26%), benzene (26%), bromomethane (26%), vinyl chloride (22%), chloroethane (26%), trichloroethene (24%), methyl tert butyl ether (26%), carbon disulfide (26%), bromochloromethane (26%), tetrahydrofuran (27%), 2,2-dichloropropane (22%), diethyl ether (26%), diisopropyl ether (24%), ethyl-tert-butyl-ether (25%), and tertiary-amyl methyl ether (24%).

L2119379-01, -02, -04, -09, -11, -13, and -15: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0098)
Average Response Factor: 1,4-dioxane

L2119379-03, -07, -08, -10, -12, and -16: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0157)
Average Response Factor: 1,4-dioxane

L2119379-05: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0119)
Average Response Factor: 1,4-dioxane

L2119379-06: Initial Calibration did not meet:
Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0025)
Average Response Factor: 1,4-dioxane

L2119379-01 through -13, -15, and -16: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

Case Narrative (continued)

Semivolatile Organics

L2119379-01 through -04, -06 through -13, -16, WG1488186-1, WG1489093-1, and WG1488186-2/-3: The initial calibration utilized a quadratic fit for butyl benzyl phthalate, bis(2-ethylhexyl)phthalate, and di-n-octylphthalate.

WG1488687-1 and WG1488687-2/-3: The initial calibration utilized a quadratic fit for 2,4,6-tribromophenol and bis(2-ethylhexyl)phthalate.

WG1489093-2/-3: The initial calibration utilized a quadratic fit for benzo(ghi)perylene.

WG1488687: A Matrix Spike and Matrix Spike Duplicate were prepared with the sample batch, however, the results could not be reported due to laboratory error.

In reference to question H:

L2119379-16: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (126%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1488186-2/-3 LCS/LCSD recoveries, associated with L2119379-01 through -04, are below the acceptance criteria for aniline (34%/29%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The surrogate recoveries for the WG1488186-2/-3 LCS/LCSD, associated with L2119379-01 through -04, are outside the acceptance criteria for 2,4,6-tribromophenol (128%/135%). The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1488687-2/-3 LCS/LCSD recoveries, associated with L2119379-06 through -08, are below the acceptance criteria for aniline (25%/24%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1489093-2 LCS recovery, associated with L2119379-09 through -13 and -16, is below the acceptance criteria for aniline (17%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are

Case Narrative (continued)

considered to have a potentially low bias for this compound.
The WG1489093-2/-3 LCS/LCSD RPDs, associated with L2119379-09 through -13 and -16, are above the acceptance criteria for 3,3'-dichlorobenzidine (46%), benzo(a)pyrene (23%), benzo(k)fluoranthene (24%), benzo(ghi)perylene (32%), dibenzo(a,h)anthracene (27%), indeno(1,2,3-cd)pyrene (36%), aniline (97%), and 4-chloroaniline (41%).
The surrogate recoveries for the WG1489093-2/-3 LCS/LCSD, associated with L2119379-09 through -13 and -16, are outside the acceptance criteria for 2,4,6-tribromophenol (123%/135%). The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

Semivolatile Organics by SIM
L2119379-01 through -04, -06 through -13, -16, WG1489095-1, and WG1489095-2/-3: The initial calibration utilized a quadratic fit for pentachlorophenol.
WG1488688: A Matrix Spike and Matrix Spike Duplicate were prepared with the sample batch, however, the results could not be reported due to laboratory error.
In reference to question H:
WG1488688-1: The surrogate recovery is outside the individual acceptance criteria for 2,4,6-tribromophenol (113%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.
The surrogate recoveries for the WG1488187-2/-3 LCS/LCSD, associated with L2119379-01 through -04, are outside the acceptance criteria for 2,4,6-tribromophenol (141%/123%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.
The WG1488688-2/-3 LCS/LCSD RPD, associated with L2119379-06 through -08, is above the acceptance criteria for naphthalene (21%).

Non-MCP Related Narratives
Perfluorinated Alkyl Acids by Isotope Dilution
L2119379-06, -11, -13, -14, WG1488529-1, and WG1488529-2: The MeOH fraction of the extraction is

Case Narrative (continued)

reported for the following compounds: Perfluorooctanesulfonamide (FOSA), N-Methyl Perfluorooctane Sulfonamide (NMeFOSA), N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA), N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE), and N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).
L2119379-13: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

Dissolved Organic Carbon
The samples were field filtered; a filter blank was not received.
L2119379-01: The sample has an elevated detection limit due to the dilution required by the sample matrix.
The WG1491055-4 MS recovery, performed on L2119379-07, is outside the acceptance criteria for dissolved organic carbon (130%); however, the associated LCS recovery is within criteria. No further action was taken.

Anions by Ion Chromatography
The WG1491001-3/-4 MS/MSD recoveries, performed on L2119379-07, are outside the acceptance criteria for chloride (73%/75%), fluoride (MS 84%), and sulfate (75%/75%); however, the associated LCS recoveries are within criteria. No further action was taken.

Phosphorus, Total
The WG1489484-3 Laboratory Duplicate RPD for phosphorus, total (74%), performed on L2119379-07, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 04/29/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	TRIP BLANK1-04152021	L2119379-05	1,2-Dichloroethane-d4	Surrogate	136	70-130	-	potential high bias
8260C	TRIP BLANK1-04152021	L2119379-05	Dibromofluoromethane	Surrogate	133	70-130	-	potential high bias
8260C	GZW-11-2-04152021	L2119379-16	Dibromofluoromethane	Surrogate	131	70-130	-	potential high bias
8260C	Batch QC	WG1487779-3	Acetone	LCS	140	70-130	05	potential high bias
8260C	Batch QC	WG1487779-4	Acetone	LCSD	140	70-130	05	potential high bias
8260C	Batch QC	WG1487779-4	Tetrahydrofuran	LCSD	140	70-130	05	potential high bias
8260C	Batch QC	WG1491614-3	1,4-Dioxane	LCS	132	70-130	01-02,04,09,11,13,15	potential high bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Methylene chloride	MSD	21	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Carbon tetrachloride	MSD	24	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Carbon tetrachloride	MSD	140	70-130	03,07-08,10,12,16	potential high bias
8260C	Batch QC (L2119379-07)	WG1491617-7	1,2-Dichloropropane	MSD	21	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	1,1-Dichloropropene	MSD	26	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Benzene	MSD	26	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Bromomethane	MSD	26	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Vinyl chloride	MSD	22	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Chloroethane	MSD	26	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Trichloroethene	MSD	24	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Trichloroethene	MSD	140	70-130	03,07-08,10,12,16	potential high bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Methyl tert butyl ether	MSD	26	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Carbon disulfide	MSD	26	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Bromochloromethane	MSD	26	20	03,07-08,10,12,16	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8260C	Batch QC (L2119379-07)	WG1491617-7	Tetrahydrofuran	MSD	27	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	2,2-Dichloropropane	MSD	22	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Diethyl ether	MSD	26	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Diisopropyl Ether	MSD	24	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Ethyl-Tert-Butyl-Ether	MSD	25	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC (L2119379-07)	WG1491617-7	Tertiary-Amyl Methyl Ether	MSD	24	20	03,07-08,10,12,16	non-directional bias
8260C	Batch QC	WG1491733-3	1,2,4-Trimethylbenzene	LCS	140	70-130	06	potential high bias
MCP Semivolatile Organics - Westborough Lab								
8270D	GZW-11-2-04152021	L2119379-16	2,4,6-Tribromophenol	Surrogate	126	15-110	-	potential high bias
8270D	Batch QC	WG1488186-2	Aniline	LCS	34	40-140	01-04	potential low bias
8270D	Batch QC	WG1488186-2	2,4,6-Tribromophenol	Surrogate	128	15-110	-	potential high bias
8270D	Batch QC	WG1488186-3	Aniline	LCSD	29	40-140	01-04	potential low bias
8270D	Batch QC	WG1488186-3	2,4,6-Tribromophenol	Surrogate	135	15-110	-	potential high bias
8270D	Batch QC	WG1488687-2	Aniline	LCS	25	40-140	06-08	potential low bias
8270D	Batch QC	WG1488687-3	Aniline	LCSD	24	40-140	06-08	potential low bias
8270D	Batch QC	WG1489093-2	Aniline	LCS	17	40-140	09-13,16	potential low bias
8270D	Batch QC	WG1489093-2	2,4,6-Tribromophenol	Surrogate	123	15-110	-	potential high bias
8270D	Batch QC	WG1489093-3	3,3'-Dichlorobenzidine	LCSD	46	20	09-13,16	non-directional bias
8270D	Batch QC	WG1489093-3	Benzo(a)pyrene	LCSD	23	20	09-13,16	non-directional bias
8270D	Batch QC	WG1489093-3	Benzo(k)fluoranthene	LCSD	24	20	09-13,16	non-directional bias
8270D	Batch QC	WG1489093-3	Benzo(ghi)perylene	LCSD	32	20	09-13,16	non-directional bias
8270D	Batch QC	WG1489093-3	Dibenzo(a,h)anthracene	LCSD	27	20	09-13,16	non-directional bias
8270D	Batch QC	WG1489093-3	Indeno(1,2,3-cd)pyrene	LCSD	36	20	09-13,16	non-directional bias
8270D	Batch QC	WG1489093-3	Aniline	LCSD	97	20	09-13,16	non-directional bias
8270D	Batch QC	WG1489093-3	4-Chloroaniline	LCSD	41	20	09-13,16	non-directional bias
8270D	Batch QC	WG1489093-3	2,4,6-Tribromophenol	Surrogate	135	15-110	-	potential high bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Semivolatile Organics by SIM - Westborough Lab								
8270D-SIM	Batch QC	WG1488187-2	2,4,6-Tribromophenol	Surrogate	141	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1488187-3	2,4,6-Tribromophenol	Surrogate	123	15-110	-	potential high bias
8270D-SIM	Laboratory Method Bl	WG1488688-1	2,4,6-Tribromophenol	Surrogate	113	15-110	-	potential high bias
8270D-SIM	Batch QC	WG1488688-3	Naphthalene	LCSD	21	20	06-08	non-directional bias
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab								
LCMSMS-ID	Batch QC (L2119881-04)	WG1488529-3	Perfluoropentanoic Acid (PFPeA)	MS	185	63-161	06,11,13-14	potential high bias
LCMSMS-ID	Batch QC (L2119881-04)	WG1488529-3	Perfluorohexanoic Acid (PFHxA)	MS	176	69-168	06,11,13-14	potential high bias
LCMSMS-ID	Batch QC (L2119881-04)	WG1488529-3	Perfluorooctanesulfonic Acid (PFOS)	MS	162	52-151	06,11,13-14	potential high bias
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2119379-07)	WG1491001-3	Chloride	MS	73	90-110	01,07-11,13	potential low bias
300.0	Batch QC (L2119379-07)	WG1491001-3	Fluoride	MS	84	90-110	01,07-11,13	potential low bias
300.0	Batch QC (L2119379-07)	WG1491001-3	Sulfate	MS	75	90-110	01,07-11,13	potential low bias
300.0	Batch QC (L2119379-07)	WG1491001-4	Chloride	MSD	75	90-110	01,07-11,13	potential low bias
300.0	Batch QC (L2119379-07)	WG1491001-4	Sulfate	MSD	75	90-110	01,07-11,13	potential low bias
General Chemistry - Westborough Lab								
4500P-E	Batch QC (L2119379-07)	WG1489484-3	Phosphorus, Total	Duplicate	74	20	01,07-09,11,13	non-directional bias
9060A	Batch QC (L2119379-07)	WG1491055-4	Dissolved Organic Carbon	MS	130	80-120	01,07-09,11,13	potential high bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-01
Client ID: HA20-CMT-6D1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:15
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 21:52
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	0.31	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-01	Date Collected:	04/14/21 16:15
Client ID:	HA20-CMT-6D1-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-01	Date Collected:	04/14/21 16:15
Client ID:	HA20-CMT-6D1-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	126		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-02 Date Collected: 04/14/21 16:15
Client ID: SW-2A-04142021 Date Received: 04/15/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 22:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-02	Date Collected:	04/14/21 16:15
Client ID:	SW-2A-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	2.2		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	3.9		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	3.9		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-02	Date Collected:	04/14/21 16:15
Client ID:	SW-2A-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	121		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-03	Date Collected:	04/14/21 16:50
Client ID:	OW-3-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 21:31
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	1.1		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-03	Date Collected:	04/14/21 16:50
Client ID:	OW-3-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-03	Date Collected:	04/14/21 16:50
Client ID:	OW-3-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	118		70-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-04
Client ID: GZW-6-1-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 17:55
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 23:14
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-04 Date Collected: 04/14/21 17:55

Client ID: GZW-6-1-04142021 Date Received: 04/15/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-04	Date Collected:	04/14/21 17:55
Client ID:	GZW-6-1-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	119		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-05
Client ID: TRIP BLANK1-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 00:00
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/18/21 09:07
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-05 Date Collected: 04/15/21 00:00
Client ID: TRIP BLANK1-04152021 Date Received: 04/15/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-05 Date Collected: 04/15/21 00:00

Client ID: TRIP BLANK1-04152021 Date Received: 04/15/21

Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**136**	Q	70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	**133**	Q	70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-06
Client ID: MW-1-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 09:10
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 06:07
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.57	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.20	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	0.68	J	ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.35	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-06 | Date Collected: 04/15/21 09:10
Client ID: MW-1-04152021 | Date Received: 04/15/21
Sample Location: CONCORD, MA | Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.9		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.34	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.34	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-06	Date Collected:	04/15/21 09:10
Client ID:	MW-1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	101		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-07	Date Collected:	04/15/21 09:10
Client ID:	HB-13-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 00:57
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.55	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-07	Date Collected:	04/15/21 09:10
Client ID:	HB-13-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.75	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-07
Client ID: HB-13-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 09:10
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	116		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-08
Client ID: MW-SD-01-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 09:45
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 22:12
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	0.38	J	ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-08	Date Collected:	04/15/21 09:45
Client ID:	MW-SD-01-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.18	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-08
Client ID: MW-SD-01-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 09:45
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	121		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-09	Date Collected:	04/15/21 10:20
Client ID:	HA20-CMT-2D1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 00:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.75	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	2.0		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-09 Date Collected: 04/15/21 10:20
Client ID: HA20-CMT-2D1-04152021 Date Received: 04/15/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.94	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.20	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.20	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	3.7	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-09	Date Collected:	04/15/21 10:20
Client ID:	HA20-CMT-2D1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	112		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-10	Date Collected:	04/15/21 12:50
Client ID:	MW-BS54-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 22:54
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.72	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-10	Date Collected:	04/15/21 12:50
Client ID:	MW-BS54-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.29	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.57	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.57	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-10
Client ID: MW-BS54-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 12:50
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	127		70-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-11
Client ID: EQ BLANK1-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 11:00
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 01:18
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.24	J	ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-11
Client ID: EQ BLANK1-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 11:00
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	3.2	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-11	Date Collected:	04/15/21 11:00
Client ID:	EQ BLANK1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	127		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-12	Date Collected:	04/15/21 13:45
Client ID:	MW-BS01-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/27/21 23:35
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	7.8		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.81	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119379

Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-12	Date Collected:	04/15/21 13:45
Client ID:	MW-BS01-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	0.96	J	ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.40	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.40	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-12	Date Collected:	04/15/21 13:45
Client ID:	MW-BS01-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	126		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-13
Client ID: GZW-10-2-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 13:05
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 01:59
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	3.8		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.55	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	0.14	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.53	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS　　**Lab Number:** L2119379
Project Number: 3252H　　**Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-13　　Date Collected: 04/15/21 13:05
Client ID: GZW-10-2-04152021　　Date Received: 04/15/21
Sample Location: CONCORD, MA　　Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.6		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.0		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	1.0		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-13 Date Collected: 04/15/21 13:05

Client ID: GZW-10-2-04152021 Date Received: 04/15/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	112		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-15	Date Collected:	04/15/21 15:55
Client ID:	MW-BS03-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Matrix:	Water
Analytical Method:	97,8260C
Analytical Date:	04/28/21 02:40
Analyst:	MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	0.84	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.57	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	0.60	J	ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-15 | Date Collected: 04/15/21 15:55
Client ID: MW-BS03-04152021 | Date Received: 04/15/21
Sample Location: CONCORD, MA | Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.6		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.74	J	ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	0.74	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	1.6	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-15	Date Collected:	04/15/21 15:55
Client ID:	MW-BS03-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	0.57	J	ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	123		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-16	Date Collected:	04/15/21 16:05
Client ID:	GZW-11-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/28/21 00:16
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-16
Client ID: GZW-11-2-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 16:05
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-16	Date Collected:	04/15/21 16:05
Client ID:	GZW-11-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	**131**	Q	70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:59
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05 Batch: WG1487779-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:59
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05 Batch: WG1487779-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/18/21 04:59
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05 Batch: WG1487779-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	130		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 21:11
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02,04,09,11,13,15 Batch: WG1491614-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 21:11
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02,04,09,11,13,15 Batch: WG1491614-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 21:11
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02,04,09,11,13,15 Batch: WG1491614-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	113		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 20:09
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03,07-08,10,12,16 Batch: WG1491617-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 20:09
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03,07-08,10,12,16 Batch: WG1491617-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/27/21 20:09
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03,07-08,10,12,16 Batch: WG1491617-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	111		70-130

Project Name: NUCLEAR METALS　　**Lab Number:** L2119379
Project Number: 3252H　　**Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/28/21 05:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 06 Batch: WG1491733-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/28/21 05:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 06 Batch: WG1491733-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/28/21 05:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 06 Batch: WG1491733-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG1487779-3 WG1487779-4								
Methylene chloride	120		110		70-130	9		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	120		110		70-130	9		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	120		110		70-130	9		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	110		98		70-130	12		20
1,2-Dichloroethane	120		120		70-130	0		20
1,1,1-Trichloroethane	120		110		70-130	9		20
Bromodichloromethane	120		110		70-130	9		20
trans-1,3-Dichloropropene	120		120		70-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	96		100		70-130	4		20
1,1,2,2-Tetrachloroethane	120		130		70-130	8		20
Benzene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	120		110		70-130	9		20
Bromomethane	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG1487779-3 WG1487779-4								
Vinyl chloride	110		110		70-130	0		20
Chloroethane	130		120		70-130	8		20
1,1-Dichloroethene	110		100		70-130	10		20
trans-1,2-Dichloroethene	110		100		70-130	10		20
Trichloroethene	110		100		70-130	10		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	110		105		70-130	5		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	110		120		70-130	9		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	110		100		70-130	10		20
Acetone	**140**	Q	**140**	Q	70-130	0		20
Carbon disulfide	120		110		70-130	9		20
Methyl ethyl ketone	120		130		70-130	8		20
Methyl isobutyl ketone	97		110		70-130	13		20
2-Hexanone	100		120		70-130	18		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	130		**140**	Q	70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG1487779-3 WG1487779-4								
2,2-Dichloropropane	120		110		70-130	9		20
1,2-Dibromoethane	100		110		70-130	10		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	97		98		70-130	1		20
n-Butylbenzene	100		110		70-130	10		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	110		100		70-130	10		20
p-Chlorotoluene	110		100		70-130	10		20
1,2-Dibromo-3-chloropropane	100		120		70-130	18		20
Hexachlorobutadiene	100		100		70-130	0		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	99		100		70-130	1		20
Naphthalene	92		97		70-130	5		20
n-Propylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	96		98		70-130	2		20
1,2,4-Trichlorobenzene	93		95		70-130	2		20
1,3,5-Trimethylbenzene	100		100		70-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Diethyl ether	100		110		70-130	10		20
Diisopropyl Ether	120		120		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		110		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG1487779-3 WG1487779-4								
Tertiary-Amyl Methyl Ether	96		100		70-130	4		20
1,4-Dioxane	126		130		70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		108		70-130
Toluene-d8	104		101		70-130
4-Bromofluorobenzene	97		91		70-130
Dibromofluoromethane	115		110		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02,04,09,11,13,15 Batch: WG1491614-3 WG1491614-4								
Methylene chloride	120		120		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	110		120		70-130	9		20
Chlorobenzene	110		110		70-130	0		20
Trichlorofluoromethane	110		110		70-130	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	110		100		70-130	10		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	110		110		70-130	0		20
1,1,2,2-Tetrachloroethane	110		100		70-130	10		20
Benzene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20
Ethylbenzene	120		120		70-130	0		20
Chloromethane	100		93		70-130	7		20
Bromomethane	85		88		70-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02,04,09,11,13,15 Batch: WG1491614-3 WG1491614-4								
Vinyl chloride	100		98		70-130	2		20
Chloroethane	110		100		70-130	10		20
1,1-Dichloroethene	110		110		70-130	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	110		110		70-130	0		20
p/m-Xylene	120		120		70-130	0		20
o-Xylene	120		120		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	110		100		70-130	10		20
Styrene	115		115		70-130	0		20
Dichlorodifluoromethane	90		91		70-130	1		20
Acetone	120		100		70-130	18		20
Carbon disulfide	110		110		70-130	0		20
Methyl ethyl ketone	110		100		70-130	10		20
Methyl isobutyl ketone	110		100		70-130	10		20
2-Hexanone	110		100		70-130	10		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	120		110		70-130	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02,04,09,11,13,15 Batch: WG1491614-3 WG1491614-4								
2,2-Dichloropropane	110		110		70-130	0		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	120		110		70-130	9		20
sec-Butylbenzene	120		110		70-130	9		20
tert-Butylbenzene	120		110		70-130	9		20
o-Chlorotoluene	120		110		70-130	9		20
p-Chlorotoluene	120		110		70-130	9		20
1,2-Dibromo-3-chloropropane	120		110		70-130	9		20
Hexachlorobutadiene	120		120		70-130	0		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	100		100		70-130	0		20
n-Propylbenzene	120		110		70-130	9		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,3,5-Trimethylbenzene	110		110		70-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
Diethyl ether	120		120		70-130	0		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02,04,09,11,13,15 Batch: WG1491614-3 WG1491614-4								
Tertiary-Amyl Methyl Ether	100		100		70-130	0		20
1,4-Dioxane	**132**	Q	126		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		89		70-130
Toluene-d8	105		103		70-130
4-Bromofluorobenzene	102		101		70-130
Dibromofluoromethane	101		101		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,07-08,10,12,16 Batch: WG1491617-3 WG1491617-4								
Methylene chloride	110		100		70-130	10		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	120		110		70-130	9		20
1,2-Dichloropropane	110		98		70-130	12		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	110		100		70-130	10		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	110		100		70-130	10		20
1,2-Dichloroethane	110		100		70-130	10		20
1,1,1-Trichloroethane	110		100		70-130	10		20
Bromodichloromethane	110		100		70-130	10		20
trans-1,3-Dichloropropene	110		100		70-130	10		20
cis-1,3-Dichloropropene	110		100		70-130	10		20
1,1-Dichloropropene	110		100		70-130	10		20
Bromoform	99		100		70-130	1		20
1,1,2,2-Tetrachloroethane	100		100		70-130	0		20
Benzene	110		100		70-130	10		20
Toluene	100		97		70-130	3		20
Ethylbenzene	120		110		70-130	9		20
Chloromethane	110		97		70-130	13		20
Bromomethane	96		86		70-130	11		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,07-08,10,12,16 Batch: WG1491617-3 WG1491617-4								
Vinyl chloride	100		88		70-130	13		20
Chloroethane	110		96		70-130	14		20
1,1-Dichloroethene	120		100		70-130	18		20
trans-1,2-Dichloroethene	110		100		70-130	10		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	110		100		70-130	10		20
1,4-Dichlorobenzene	110		100		70-130	10		20
Methyl tert butyl ether	100		100		70-130	0		20
p/m-Xylene	115		110		70-130	4		20
o-Xylene	105		100		70-130	5		20
cis-1,2-Dichloroethene	110		100		70-130	10		20
Dibromomethane	110		100		70-130	10		20
1,2,3-Trichloropropane	100		99		70-130	1		20
Styrene	110		105		70-130	5		20
Dichlorodifluoromethane	85		76		70-130	11		20
Acetone	120		100		70-130	18		20
Carbon disulfide	110		100		70-130	10		20
Methyl ethyl ketone	110		94		70-130	16		20
Methyl isobutyl ketone	93		89		70-130	4		20
2-Hexanone	100		92		70-130	8		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,07-08,10,12,16 Batch: WG1491617-3 WG1491617-4								
2,2-Dichloropropane	110		100		70-130	10		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	100		100		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	110		100		70-130	10		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	110		100		70-130	10		20
o-Chlorotoluene	110		100		70-130	10		20
p-Chlorotoluene	110		100		70-130	10		20
1,2-Dibromo-3-chloropropane	99		100		70-130	1		20
Hexachlorobutadiene	110		110		70-130	0		20
Isopropylbenzene	110		100		70-130	10		20
p-Isopropyltoluene	100		95		70-130	5		20
Naphthalene	93		93		70-130	0		20
n-Propylbenzene	110		100		70-130	10		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	110		100		70-130	10		20
1,2,4-Trimethylbenzene	110		100		70-130	10		20
Diethyl ether	100		100		70-130	0		20
Diisopropyl Ether	100		98		70-130	2		20
Ethyl-Tert-Butyl-Ether	100		98		70-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,07-08,10,12,16 Batch: WG1491617-3 WG1491617-4								
Tertiary-Amyl Methyl Ether	97		92		70-130	5		20
1,4-Dioxane	118		116		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		90		70-130
Toluene-d8	101		104		70-130
4-Bromofluorobenzene	98		94		70-130
Dibromofluoromethane	103		102		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06 Batch: WG1491733-3 WG1491733-4								
Methylene chloride	96		93		70-130	3		20
1,1-Dichloroethane	100		96		70-130	4		20
Chloroform	98		94		70-130	4		20
Carbon tetrachloride	98		95		70-130	3		20
1,2-Dichloropropane	100		97		70-130	3		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	98		94		70-130	4		20
Chlorobenzene	100		98		70-130	2		20
Trichlorofluoromethane	100		97		70-130	3		20
1,2-Dichloroethane	110		100		70-130	10		20
1,1,1-Trichloroethane	99		95		70-130	4		20
Bromodichloromethane	99		96		70-130	3		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	100		95		70-130	5		20
Bromoform	91		90		70-130	1		20
1,1,2,2-Tetrachloroethane	96		95		70-130	1		20
Benzene	99		96		70-130	3		20
Toluene	110		100		70-130	10		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	99		94		70-130	5		20
Bromomethane	100		93		70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06 Batch: WG1491733-3 WG1491733-4								
Vinyl chloride	100		98		70-130	2		20
Chloroethane	98		94		70-130	4		20
1,1-Dichloroethene	94		89		70-130	5		20
trans-1,2-Dichloroethene	92		87		70-130	6		20
Trichloroethene	91		87		70-130	4		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		99		70-130	1		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		99		70-130	1		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	105		100		70-130	5		20
cis-1,2-Dichloroethene	94		90		70-130	4		20
Dibromomethane	97		95		70-130	2		20
1,2,3-Trichloropropane	100		100		70-130	0		20
Styrene	105		100		70-130	5		20
Dichlorodifluoromethane	91		88		70-130	3		20
Acetone	110		110		70-130	0		20
Carbon disulfide	95		91		70-130	4		20
Methyl ethyl ketone	110		110		70-130	0		20
Methyl isobutyl ketone	100		99		70-130	1		20
2-Hexanone	110		110		70-130	0		20
Bromochloromethane	93		87		70-130	7		20
Tetrahydrofuran	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06 Batch: WG1491733-3 WG1491733-4								
2,2-Dichloropropane	110		100		70-130	10		20
1,2-Dibromoethane	110		100		70-130	10		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	88		86		70-130	2		20
n-Butylbenzene	130		120		70-130	8		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	82		81		70-130	1		20
Hexachlorobutadiene	84		82		70-130	2		20
Isopropylbenzene	97		95		70-130	2		20
p-Isopropyltoluene	110		100		70-130	10		20
Naphthalene	100		100		70-130	0		20
n-Propylbenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,3,5-Trimethylbenzene	130		130		70-130	0		20
1,2,4-Trimethylbenzene	**140**	Q	130		70-130	7		20
Diethyl ether	99		98		70-130	1		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 06 Batch: WG1491733-3 WG1491733-4								
Tertiary-Amyl Methyl Ether	99		97		70-130	2		20
1,4-Dioxane	88		84		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	112		108		70-130
Toluene-d8	107		106		70-130
4-Bromofluorobenzene	91		95		70-130
Dibromofluoromethane	97		95		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,07-08,10,12,16 QC Batch ID: WG1491617-6 WG1491617-7 QC Sample: L2119379-07 Client ID: HB-13-04152021												
Methylene chloride	ND	10	9.7	97		12	120		70-130	**21**	Q	20
1,1-Dichloroethane	ND	10	10	100		12	120		70-130	18		20
Chloroform	ND	10	10	100		12	120		70-130	18		20
Carbon tetrachloride	ND	10	11	110		14	**140**	Q	70-130	**24**	Q	20
1,2-Dichloropropane	ND	10	9.7	97		12	120		70-130	**21**	Q	20
Dibromochloromethane	ND	10	9.9	99		12	120		70-130	19		20
1,1,2-Trichloroethane	ND	10	10	100		12	120		70-130	18		20
Tetrachloroethene	0.55J	10	12	120		13	130		70-130	8		20
Chlorobenzene	ND	10	10	100		12	120		70-130	18		20
Trichlorofluoromethane	ND	10	11	110		13	130		70-130	17		20
1,2-Dichloroethane	ND	10	9.8	98		12	120		70-130	20		20
1,1,1-Trichloroethane	ND	10	11	110		13	130		70-130	17		20
Bromodichloromethane	ND	10	10	100		12	120		70-130	18		20
trans-1,3-Dichloropropene	ND	10	10	100		12	120		70-130	18		20
cis-1,3-Dichloropropene	ND	10	9.2	92		11	110		70-130	18		20
1,1-Dichloropropene	ND	10	10	100		13	130		70-130	**26**	Q	20
Bromoform	ND	10	9.8	98		11	110		70-130	12		20
1,1,2,2-Tetrachloroethane	ND	10	10	100		12	120		70-130	18		20
Benzene	ND	10	10	100		13	130		70-130	**26**	Q	20
Toluene	ND	10	9.7	97		11	110		70-130	13		20
Ethylbenzene	ND	10	11	110		13	130		70-130	17		20
Chloromethane	ND	10	9.9	99		12	120		70-130	19		20
Bromomethane	ND	10	9.2	92		12	120		70-130	**26**	Q	20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,07-08,10,12,16 QC Batch ID: WG1491617-6 WG1491617-7 QC Sample: L2119379-07 Client ID: HB-13-04152021												
Vinyl chloride	ND	10	8.8	88		11	110		70-130	**22**	Q	20
Chloroethane	ND	10	10	100		13	130		70-130	**26**	Q	20
1,1-Dichloroethene	ND	10	11	110		13	130		70-130	17		20
trans-1,2-Dichloroethene	ND	10	10	100		12	120		70-130	18		20
Trichloroethene	0.75J	10	11	110		14	**140**	Q	70-130	**24**	Q	20
1,2-Dichlorobenzene	ND	10	9.9	99		11	110		70-130	11		20
1,3-Dichlorobenzene	ND	10	10	100		12	120		70-130	18		20
1,4-Dichlorobenzene	ND	10	10	100		12	120		70-130	18		20
Methyl tert butyl ether	ND	10	9.2	92		12	120		70-130	**26**	Q	20
p/m-Xylene	ND	20	22	110		26	130		70-130	17		20
o-Xylene	ND	20	20	100		23	115		70-130	14		20
cis-1,2-Dichloroethene	ND	10	9.9	99		12	120		70-130	19		20
Dibromomethane	ND	10	9.8	98		12	120		70-130	20		20
1,2,3-Trichloropropane	ND	10	9.7	97		11	110		70-130	13		20
Styrene	ND	20	21	105		24	120		70-130	13		20
Dichlorodifluoromethane	ND	10	7.5	75		9.2	92		70-130	20		20
Acetone	ND	10	10	100		12	120		70-130	18		20
Carbon disulfide	ND	10	10	100		13	130		70-130	**26**	Q	20
Methyl ethyl ketone	ND	10	10	100		12	120		70-130	18		20
Methyl isobutyl ketone	ND	10	8.8	88		10	100		70-130	13		20
2-Hexanone	ND	10	8.4	84		10	100		70-130	17		20
Bromochloromethane	ND	10	10	100		13	130		70-130	**26**	Q	20
Tetrahydrofuran	ND	10	9.1	91		12	120		70-130	**27**	Q	20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,07-08,10,12,16 QC Batch ID: WG1491617-6 WG1491617-7 QC Sample: L2119379-07 Client ID: HB-13-04152021												
2,2-Dichloropropane	ND	10	9.6	96		12	120		70-130	**22**	Q	20
1,2-Dibromoethane	ND	10	9.8	98		11	110		70-130	12		20
1,3-Dichloropropane	ND	10	9.8	98		11	110		70-130	12		20
1,1,1,2-Tetrachloroethane	ND	10	10	100		12	120		70-130	18		20
Bromobenzene	ND	10	9.6	96		11	110		70-130	14		20
n-Butylbenzene	ND	10	10	100		12	120		70-130	18		20
sec-Butylbenzene	ND	10	10	100		12	120		70-130	18		20
tert-Butylbenzene	ND	10	10	100		12	120		70-130	18		20
o-Chlorotoluene	ND	10	10	100		12	120		70-130	18		20
p-Chlorotoluene	ND	10	9.9	99		12	120		70-130	19		20
1,2-Dibromo-3-chloropropane	ND	10	9.3	93		11	110		70-130	17		20
Hexachlorobutadiene	ND	10	11	110		12	120		70-130	9		20
Isopropylbenzene	ND	10	10	100		12	120		70-130	18		20
p-Isopropyltoluene	ND	10	9.6	96		11	110		70-130	14		20
Naphthalene	ND	10	8.2	82		9.7	97		70-130	17		20
n-Propylbenzene	ND	10	10	100		12	120		70-130	18		20
1,2,3-Trichlorobenzene	ND	10	9.7	97		11	110		70-130	13		20
1,2,4-Trichlorobenzene	ND	10	9.3	93		11	110		70-130	17		20
1,3,5-Trimethylbenzene	ND	10	10	100		12	120		70-130	18		20
1,2,4-Trimethylbenzene	ND	10	10	100		12	120		70-130	18		20
Diethyl ether	ND	10	9.2	92		12	120		70-130	**26**	Q	20
Diisopropyl Ether	ND	10	9.4	94		12	120		70-130	**24**	Q	20
Ethyl-Tert-Butyl-Ether	ND	10	9.3	93		12	120		70-130	**25**	Q	20

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03,07-08,10,12,16 QC Batch ID: WG1491617-6 WG1491617-7 QC Sample: L2119379-07 Client ID: HB-13-04152021												
Tertiary-Amyl Methyl Ether	ND	10	8.6	86		11	110		70-130	**24**	Q	20
1,4-Dioxane	ND	500	400	80		440	88		70-130	10		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		95		70-130
4-Bromofluorobenzene	88		91		70-130
Dibromofluoromethane	96		98		70-130
Toluene-d8	98		100		70-130

SEMIVOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-01	Date Collected:	04/14/21 16:15
Client ID:	HA20-CMT-6D1-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/19/21 23:42
Analytical Date:	04/21/21 09:04		
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	1.7	J	ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-01 Date Collected: 04/14/21 16:15
Client ID: HA20-CMT-6D1-04142021 Date Received: 04/15/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		15-110
Phenol-d6	67		15-110
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	109		15-110
4-Terphenyl-d14	98		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-01
Client ID: HA20-CMT-6D1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:15
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 15:02
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 00:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-01 Date Collected: 04/14/21 16:15
Client ID: HA20-CMT-6D1-04142021 Date Received: 04/15/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		15-110
Phenol-d6	81		15-110
Nitrobenzene-d5	105		30-130
2-Fluorobiphenyl	110		30-130
2,4,6-Tribromophenol	95		15-110
4-Terphenyl-d14	126		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-01	Date Collected:	04/14/21 16:15
Client ID:	HA20-CMT-6D1-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:00
Analytical Date:	04/29/21 01:37		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.226		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-02
Client ID: SW-2A-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:15
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 09:27
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-02
Client ID: SW-2A-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:15
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		15-110
Phenol-d6	67		15-110
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	84		30-130
2,4,6-Tribromophenol	93		15-110
4-Terphenyl-d14	90		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119379

Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-02
Client ID: SW-2A-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:15
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 15:21
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 00:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-02	Date Collected:	04/14/21 16:15
Client ID:	SW-2A-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		15-110
Phenol-d6	71		15-110
Nitrobenzene-d5	94		30-130
2-Fluorobiphenyl	94		30-130
2,4,6-Tribromophenol	65		15-110
4-Terphenyl-d14	104		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-02
Client ID: SW-2A-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:15
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/29/21 02:03
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.108	J	ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-03
Client ID: OW-3-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:50
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/21/21 09:49
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-03	Date Collected:	04/14/21 16:50
Client ID:	OW-3-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	54		15-110
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	73		30-130
2,4,6-Tribromophenol	80		15-110
4-Terphenyl-d14	81		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-03
Client ID: OW-3-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:50
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 15:39
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/20/21 00:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-03	Date Collected:	04/14/21 16:50
Client ID:	OW-3-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		15-110
Phenol-d6	66		15-110
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	90		30-130
2,4,6-Tribromophenol	80		15-110
4-Terphenyl-d14	99		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-03	Date Collected:	04/14/21 16:50
Client ID:	OW-3-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:00
Analytical Date:	04/29/21 02:28		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.700		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-04
Date Collected: 04/14/21 17:55
Client ID: GZW-6-1-04142021
Date Received: 04/15/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Extraction Method: EPA 3510C
Analytical Method: 97,8270D
Extraction Date: 04/19/21 23:42
Analytical Date: 04/21/21 10:12
Analyst: SZ

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	1.7	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-04	Date Collected:	04/14/21 17:55
Client ID:	GZW-6-1-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		15-110
Phenol-d6	35		15-110
Nitrobenzene-d5	41		30-130
2-Fluorobiphenyl	49		30-130
2,4,6-Tribromophenol	69		15-110
4-Terphenyl-d14	70		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-04
Client ID: GZW-6-1-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 17:55
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 15:58
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/20/21 00:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-04	Date Collected:	04/14/21 17:55
Client ID:	GZW-6-1-04142021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	27		15-110
Phenol-d6	40		15-110
Nitrobenzene-d5	47		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	36		15-110
4-Terphenyl-d14	89		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-04
Client ID: GZW-6-1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 17:55
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/29/21 02:53
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-06	Date Collected:	04/15/21 09:10
Client ID:	MW-1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/20/21 16:36
Analytical Date:	04/21/21 04:24		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.83	0.532	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.3	6.75	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.3	6.09	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	45.8	20.4	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	45.8	20.6	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	72		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	61		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	59		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	62		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	58		10-187

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-06
Client ID: MW-1-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 09:10
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/26/21 05:15
Analyst: HT
Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	2.60		ng/l	1.83	0.374	1
Perfluoropentanoic Acid (PFPeA)	4.96		ng/l	1.83	0.363	1
Perfluorobutanesulfonic Acid (PFBS)	1.05	J	ng/l	1.83	0.218	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.83	0.414	1
Perfluorohexanoic Acid (PFHxA)	4.12		ng/l	1.83	0.301	1
Perfluoropentanesulfonic Acid (PFPeS)	0.308	J	ng/l	1.83	0.225	1
Perfluoroheptanoic Acid (PFHpA)	2.32		ng/l	1.83	0.206	1
Perfluorohexanesulfonic Acid (PFHxS)	2.22		ng/l	1.83	0.345	1
Perfluorooctanoic Acid (PFOA)	7.78		ng/l	1.83	0.216	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.83	1.22	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.83	0.631	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.83	0.286	1
Perfluorooctanesulfonic Acid (PFOS)	7.55		ng/l	1.83	0.462	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.83	0.279	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.83	1.11	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.83	1.03	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.83	0.594	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.83	0.238	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.83	0.899	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.83	0.737	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.83	0.341	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.83	0.300	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.83	0.227	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	45.8	20.8	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.83	0.308	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.67	1.14	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.67	1.05	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-06	Date Collected:	04/15/21 09:10
Client ID:	MW-1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.83	0.565	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.58	1.85	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.83	0.254	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.83	0.269	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	74		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	95		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	102		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	83		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	68		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	72		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	109		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	71		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	112		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	66		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	70		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	117		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	37		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	73		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	41		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	80		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	76		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	90		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	101		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-06	Date Collected:	04/15/21 09:10
Client ID:	MW-1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/21/21 11:24
Analytical Date:	04/23/21 16:06		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119379

Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-06	Date Collected:	04/15/21 09:10
Client ID:	MW-1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	102		15-110
4-Terphenyl-d14	87		30-130

Project Name: NUCLEAR METALS

Lab Number: L2119379

Project Number: 3252H

Report Date: 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-06	Date Collected:	04/15/21 09:10
Client ID:	MW-1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:27
Analytical Date:	04/26/21 14:05		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119379

Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-06	Date Collected:	04/15/21 09:10
Client ID:	MW-1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		15-110
Phenol-d6	74		15-110
Nitrobenzene-d5	93		30-130
2-Fluorobiphenyl	99		30-130
2,4,6-Tribromophenol	77		15-110
4-Terphenyl-d14	107		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-06	Date Collected:	04/15/21 09:10
Client ID:	MW-1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:00
Analytical Date:	04/29/21 03:18		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	4.35		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119379

Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-07
Client ID: HB-13-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 09:10
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/23/21 16:29
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-07	Date Collected:	04/15/21 09:10
Client ID:	HB-13-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	62		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	88		15-110
4-Terphenyl-d14	84		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-07
Client ID: HB-13-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 09:10
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 14:24
Analyst: DV
Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-07 Date Collected: 04/15/21 09:10

Client ID: HB-13-04152021 Date Received: 04/15/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	70		15-110
Nitrobenzene-d5	87		30-130
2-Fluorobiphenyl	89		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	95		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-07	Date Collected:	04/15/21 09:10
Client ID:	HB-13-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:00
Analytical Date:	04/29/21 03:43		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119379

Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-08
Client ID: MW-SD-01-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 09:45
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/23/21 16:51
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	3.3		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-08 Date Collected: 04/15/21 09:45

Client ID: MW-SD-01-04152021 Date Received: 04/15/21

Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		15-110
Phenol-d6	53		15-110
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	89		15-110
4-Terphenyl-d14	84		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-08
Client ID: MW-SD-01-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 09:45
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 14:43
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-08	Date Collected:	04/15/21 09:45
Client ID:	MW-SD-01-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		15-110
Phenol-d6	65		15-110
Nitrobenzene-d5	92		30-130
2-Fluorobiphenyl	95		30-130
2,4,6-Tribromophenol	66		15-110
4-Terphenyl-d14	97		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-08	Date Collected:	04/15/21 09:45
Client ID:	MW-SD-01-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:00
Analytical Date:	04/29/21 04:59		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	4.57		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-09
Client ID: HA20-CMT-2D1-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 10:20
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/22/21 16:36
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-09	Date Collected:	04/15/21 10:20
Client ID:	HA20-CMT-2D1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	66		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	105		15-110
4-Terphenyl-d14	65		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-09
Client ID: HA20-CMT-2D1-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 10:20
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 16:36
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.05	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-09	Date Collected:	04/15/21 10:20
Client ID:	HA20-CMT-2D1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		15-110
Phenol-d6	57		15-110
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	87		15-110
4-Terphenyl-d14	73		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-09	Date Collected:	04/15/21 10:20
Client ID:	HA20-CMT-2D1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:00
Analytical Date:	04/29/21 05:25		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	2.57		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119379

Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-10	Date Collected:	04/15/21 12:50
Client ID:	MW-BS54-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/21/21 17:17
Analytical Date:	04/22/21 16:59		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-10	Date Collected:	04/15/21 12:50
Client ID:	MW-BS54-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		15-110
Phenol-d6	37		15-110
Nitrobenzene-d5	53		30-130
2-Fluorobiphenyl	50		30-130
2,4,6-Tribromophenol	55		15-110
4-Terphenyl-d14	51		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-10
Client ID: MW-BS54-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 12:50
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 16:55
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-10	Date Collected:	04/15/21 12:50
Client ID:	MW-BS54-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		15-110
Phenol-d6	39		15-110
Nitrobenzene-d5	61		30-130
2-Fluorobiphenyl	60		30-130
2,4,6-Tribromophenol	27		15-110
4-Terphenyl-d14	62		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-10
Client ID: MW-BS54-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 12:50
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/29/21 05:51
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	5.37		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-11
Client ID: EQ BLANK1-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 11:00
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/21 04:31
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.71	0.496	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	17.1	6.29	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	17.1	5.68	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	42.8	19.0	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	42.8	19.3	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	73		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	57		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	56		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	61		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	58		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-11	Date Collected:	04/15/21 11:00
Client ID:	EQ BLANK1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/20/21 16:36
Analytical Date:	04/26/21 05:31		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.71	0.349	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.71	0.339	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.71	0.204	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.71	0.386	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.71	0.280	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.71	0.210	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.71	0.193	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.71	0.322	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.71	0.202	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.71	1.14	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.71	0.588	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.71	0.267	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.71	0.431	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.71	0.260	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.71	1.04	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.71	0.958	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.71	0.554	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.71	0.222	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.71	0.838	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.71	0.688	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.71	0.318	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.71	0.280	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.71	0.212	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	42.8	19.4	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.71	0.287	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.42	1.06	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.42	0.982	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-11	Date Collected:	04/15/21 11:00
Client ID:	EQ BLANK1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.71	0.527	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.28	1.73	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.71	0.237	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.71	0.251	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	121		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	112		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	112		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	97		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	96		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	93		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	94		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	124		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	90		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	97		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	94		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	136		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	86		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	117		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	119		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	104		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	102		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	120		10-206

Project Name: NUCLEAR METALS　　**Lab Number:** L2119379
Project Number: 3252H　　**Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-11　　Date Collected: 04/15/21 11:00
Client ID: EQ BLANK1-04152021　　Date Received: 04/15/21
Sample Location: CONCORD, MA　　Field Prep: Refer to COC

Sample Depth:
Matrix: Water　　Extraction Method: EPA 3510C
Analytical Method: 97,8270D　　Extraction Date: 04/21/21 17:17
Analytical Date: 04/22/21 17:22
Analyst: JG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-11	Date Collected:	04/15/21 11:00
Client ID:	EQ BLANK1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		15-110
Phenol-d6	31		15-110
Nitrobenzene-d5	44		30-130
2-Fluorobiphenyl	44		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	47		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-11
Client ID: EQ BLANK1-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 11:00
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 17:14
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.32		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.10	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-11	Date Collected:	04/15/21 11:00
Client ID:	EQ BLANK1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	66		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	39		15-110
4-Terphenyl-d14	65		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-11	Date Collected:	04/15/21 11:00
Client ID:	EQ BLANK1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:00
Analytical Date:	04/29/21 06:16		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-12
Client ID: MW-BS01-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 13:45
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 04/22/21 17:44
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-12	Date Collected:	04/15/21 13:45
Client ID:	MW-BS01-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-110
Phenol-d6	35		15-110
Nitrobenzene-d5	46		30-130
2-Fluorobiphenyl	45		30-130
2,4,6-Tribromophenol	72		15-110
4-Terphenyl-d14	51		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-12	Date Collected:	04/15/21 13:45
Client ID:	MW-BS01-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 17:19
Analytical Date:	04/26/21 17:33		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-12	Date Collected:	04/15/21 13:45
Client ID:	MW-BS01-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	50		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	73		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-12
Client ID: MW-BS01-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 13:45
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/29/21 06:42
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	29.7		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-13
Client ID: GZW-10-2-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 13:05
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/21/21 04:38
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.81	0.525	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	18.1	6.66	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	18.1	6.01	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	45.2	20.1	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	45.2	20.4	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	62		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	59		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	56		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	55		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	52		10-187

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-13
Client ID: GZW-10-2-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 13:05
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/26/21 05:48
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	9.08		ng/l	1.81	0.369	1
Perfluoropentanoic Acid (PFPeA)	23.3		ng/l	1.81	0.358	1
Perfluorobutanesulfonic Acid (PFBS)	0.749	J	ng/l	1.81	0.215	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	1.43	J	ng/l	1.81	0.409	1
Perfluorohexanoic Acid (PFHxA)	25.0		ng/l	1.81	0.297	1
Perfluoropentanesulfonic Acid (PFPeS)	0.616	J	ng/l	1.81	0.222	1
Perfluoroheptanoic Acid (PFHpA)	8.86		ng/l	1.81	0.204	1
Perfluorohexanesulfonic Acid (PFHxS)	2.74		ng/l	1.81	0.340	1
Perfluorooctanoic Acid (PFOA)	7.78		ng/l	1.81	0.214	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	367		ng/l	1.81	1.20	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.81	0.623	1
Perfluorononanoic Acid (PFNA)	0.337	J	ng/l	1.81	0.282	1
Perfluorooctanesulfonic Acid (PFOS)	3.53		ng/l	1.81	0.456	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.81	0.275	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.81	1.10	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.81	1.01	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.81	0.586	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.81	0.235	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.81	0.887	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	1.51	J	ng/l	1.81	0.728	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.81	0.337	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.81	0.296	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.81	0.224	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	45.2	20.5	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.81	0.304	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	3.62	1.12	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	3.62	1.04	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-13	Date Collected:	04/15/21 13:05
Client ID:	GZW-10-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	1.81	0.558	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	4.52	1.83	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.81	0.250	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.81	0.265	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	81		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	97		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	89		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	119		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	71		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	76		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	90		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	78		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**170**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	71		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	79		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	75		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	114		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	51		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	76		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	53		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	76		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	64		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	98		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	81		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-13	Date Collected:	04/15/21 13:05
Client ID:	GZW-10-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/21/21 17:17
Analytical Date:	04/22/21 18:07		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS　　**Lab Number:** L2119379
Project Number: 3252H　　**Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-13	Date Collected:	04/15/21 13:05
Client ID:	GZW-10-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		15-110
Phenol-d6	43		15-110
Nitrobenzene-d5	54		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	87		15-110
4-Terphenyl-d14	59		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-13
Client ID: GZW-10-2-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 13:05
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 17:52
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-13	Date Collected:	04/15/21 13:05
Client ID:	GZW-10-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	61		30-130
2-Fluorobiphenyl	63		30-130
2,4,6-Tribromophenol	49		15-110
4-Terphenyl-d14	64		30-130

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-13
Client ID: GZW-10-2-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 13:05
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/29/21 07:08
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	42.0		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2119379

Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-14	Date Collected:	04/15/21 13:10
Client ID:	FIELD BLANK1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/20/21 16:36
Analytical Date:	04/21/21 04:45		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.03	0.589	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.3	7.48	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.3	6.75	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.8	22.6	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.8	22.9	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	70		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	53		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	49		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	64		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	61		10-187

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-14	Date Collected:	04/15/21 13:10
Client ID:	FIELD BLANK1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	ALPHA 23528
Analytical Method:	134,LCMSMS-ID	Extraction Date:	04/20/21 16:36
Analytical Date:	04/26/21 06:04		
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.03	0.415	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.03	0.402	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.03	0.242	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.03	0.459	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.03	0.333	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.03	0.249	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.03	0.229	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.03	0.382	1
Perfluorooctanoic Acid (PFOA)	0.264	J	ng/l	2.03	0.240	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.03	1.35	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.03	0.699	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.03	0.317	1
Perfluorooctanesulfonic Acid (PFOS)	0.890	J	ng/l	2.03	0.512	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.03	0.309	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.03	1.23	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.03	1.14	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.03	0.658	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.03	0.264	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.03	0.996	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.03	0.817	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.03	0.378	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.03	0.332	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.03	0.252	1
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.8	23.1	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.03	0.341	1
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.06	1.26	1
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.06	1.17	1

Project Name: NUCLEAR METALS　　**Lab Number:** L2119379

Project Number: 3252H　　**Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-14	Date Collected:	04/15/21 13:10
Client ID:	FIELD BLANK1-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.03	0.626	1
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.08	2.05	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.03	0.281	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.03	0.298	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	90		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	113		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	113		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	116		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	97		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	97		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	96		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	90		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	107		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	85		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	91		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	84		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	133		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	72		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	90		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	65		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	83		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	71		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	113		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	109		10-206

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-16	Date Collected:	04/15/21 16:05
Client ID:	GZW-11-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D	Extraction Date:	04/21/21 17:17
Analytical Date:	04/22/21 16:13		
Analyst:	JG		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	2.4	J	ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-16	Date Collected:	04/15/21 16:05
Client ID:	GZW-11-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		15-110
Phenol-d6	59		15-110
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	**126**	Q	15-110
4-Terphenyl-d14	93		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-16
Client ID: GZW-11-2-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 16:05
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 04/26/21 18:11
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.01	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.05	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.06	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.11		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.04	J	ug/l	0.10	0.01	1
Chrysene	0.04	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.09	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.04	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.10	J	ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.08	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: NUCLEAR METALS | **Lab Number:** L2119379

Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-16	Date Collected:	04/15/21 16:05
Client ID:	GZW-11-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	60		15-110
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	45		15-110
4-Terphenyl-d14	94		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

SAMPLE RESULTS

Lab ID:	L2119379-16	Date Collected:	04/15/21 16:05
Client ID:	GZW-11-2-04152021	Date Received:	04/15/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	04/21/21 11:00
Analytical Date:	04/29/21 09:16		
Analyst:	PS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0889	J	ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 01:32
Analyst: SZ
Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04 Batch: WG1488186-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 01:32
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 04/19/21 23:21

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04 Batch: WG1488186-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D	Extraction Method:	EPA 3510C
Analytical Date:	04/21/21 01:32	Extraction Date:	04/19/21 23:21
Analyst:	SZ		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04 Batch: WG1488186-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		15-110
Phenol-d6	48		15-110
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	84		15-110
4-Terphenyl-d14	90		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/23/21 20:09	Extraction Date:	04/19/21 23:22
Analyst:	JRW		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-04 Batch: WG1488187-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	04/23/21 20:09	Extraction Date:	04/19/21 23:22
Analyst:	JRW		

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-04 Batch: WG1488187-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	57		30-130
2-Fluorobiphenyl	69		30-130
2,4,6-Tribromophenol	89		15-110
4-Terphenyl-d14	98		30-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/21/21 02:57	Extraction Date:	04/20/21 16:36
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06,11,13-14 Batch: WG1488529-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	20.0	7.36
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	20.0	6.64
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	50.0	22.2
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	50.0	22.5

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	72		10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	48		10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	45		10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	62		10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	59		10-187

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/26/21 04:41
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06,11,13-14 Batch: WG1488529-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	0.452
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	0.245
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	0.576	J	ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	1.12
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND		ng/l	50.0	22.7
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.336
Perfluorohexadecanoic Acid (PFHxDA)	ND		ng/l	4.00	1.24

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/26/21 04:41
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 04/20/21 16:36

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06,11,13-14 Batch: WG1488529-1					
Perfluorooctadecanoic Acid (PFODA)	ND		ng/l	4.00	1.15
Perfluorododecane Sulfonic Acid (PFDoDS)	ND		ng/l	2.00	0.616
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND		ng/l	5.00	2.02
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.277
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.293

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	134,LCMSMS-ID	Extraction Method:	ALPHA 23528
Analytical Date:	04/26/21 04:41	Extraction Date:	04/20/21 16:36
Analyst:	HT		

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06,11,13-14 Batch: WG1488529-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	90		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	108		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	109		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	110		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	94		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	92		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	103		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	109		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	83		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	88		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	139		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	68		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	90		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	63		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	91		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	92		22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	117		10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	111		10-206

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 19:27
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:54

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 06-08 Batch: WG1488687-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS **Lab Number:** L2119379

Project Number: 3252H **Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 19:27
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:54

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 06-08 Batch: WG1488687-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/21/21 19:27
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:54

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 06-08 Batch: WG1488687-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		15-110
Phenol-d6	63		15-110
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	71		15-110
4-Terphenyl-d14	68		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 13:30
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 06-08 Batch: WG1488688-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/21/21 13:30
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 00:58

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 06-08 Batch: WG1488688-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	89		15-110
Phenol-d6	56		15-110
Nitrobenzene-d5	97		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	**113**	Q	15-110
4-Terphenyl-d14	78		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/25/21 18:11
Analyst: PS
Extraction Method: EPA 3510C
Extraction Date: 04/21/21 11:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-04,06-13,16 Batch: WG1488917-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/22/21 08:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 09-13,16 Batch: WG1489093-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/22/21 08:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 09-13,16 Batch: WG1489093-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 04/22/21 08:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:17

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 09-13,16 Batch: WG1489093-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	31		15-110
Nitrobenzene-d5	42		30-130
2-Fluorobiphenyl	41		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	43		30-130

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 11:54
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 09-13,16 Batch: WG1489095-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	0.03	J	ug/l	0.10	0.01
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	0.01	J	ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	0.02	J	ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.08
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 04/22/21 11:54
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 04/21/21 17:19

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 09-13,16 Batch: WG1489095-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		15-110
Phenol-d6	36		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	48		30-130
2,4,6-Tribromophenol	63		15-110
4-Terphenyl-d14	54		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG1488186-2 WG1488186-3								
Acenaphthene	73		75		40-140	3		20
1,2,4-Trichlorobenzene	76		76		40-140	0		20
Hexachlorobenzene	84		85		40-140	1		20
Bis(2-chloroethyl)ether	68		68		40-140	0		20
2-Chloronaphthalene	78		80		40-140	3		20
1,2-Dichlorobenzene	69		70		40-140	1		20
1,3-Dichlorobenzene	69		69		40-140	0		20
1,4-Dichlorobenzene	69		68		40-140	1		20
3,3'-Dichlorobenzidine	64		62		40-140	3		20
2,4-Dinitrotoluene	86		89		40-140	3		20
2,6-Dinitrotoluene	96		103		40-140	7		20
Azobenzene	62		66		40-140	6		20
Fluoranthene	81		87		40-140	7		20
4-Bromophenyl phenyl ether	86		89		40-140	3		20
Bis(2-chloroisopropyl)ether	75		79		40-140	5		20
Bis(2-chloroethoxy)methane	66		70		40-140	6		20
Hexachlorobutadiene	76		75		40-140	1		20
Hexachloroethane	63		67		40-140	6		20
Isophorone	63		69		40-140	9		20
Naphthalene	72		74		40-140	3		20
Nitrobenzene	74		79		40-140	7		20
Bis(2-ethylhexyl)phthalate	72		79		40-140	9		20
Butyl benzyl phthalate	78		86		40-140	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119379

Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG1488186-2 WG1488186-3								
Di-n-butylphthalate	69		76		40-140	10		20
Di-n-octylphthalate	80		86		40-140	7		20
Diethyl phthalate	75		78		40-140	4		20
Dimethyl phthalate	85		90		40-140	6		20
Benzo(a)anthracene	78		82		40-140	5		20
Benzo(a)pyrene	84		87		40-140	4		20
Benzo(b)fluoranthene	85		90		40-140	6		20
Benzo(k)fluoranthene	82		85		40-140	4		20
Chrysene	78		81		40-140	4		20
Acenaphthylene	76		81		40-140	6		20
Anthracene	78		81		40-140	4		20
Benzo(ghi)perylene	81		83		40-140	2		20
Fluorene	75		77		40-140	3		20
Phenanthrene	75		80		40-140	6		20
Dibenzo(a,h)anthracene	80		84		40-140	5		20
Indeno(1,2,3-cd)pyrene	83		88		40-140	6		20
Pyrene	79		84		40-140	6		20
Aniline	**34**	Q	**29**	Q	40-140	16		20
4-Chloroaniline	55		52		40-140	6		20
Dibenzofuran	74		76		40-140	3		20
2-Methylnaphthalene	76		76		40-140	0		20
Acetophenone	68		72		40-140	6		20
2,4,6-Trichlorophenol	95		98		30-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG1488186-2 WG1488186-3								
2-Chlorophenol	73		78		30-130	7		20
2,4-Dichlorophenol	86		92		30-130	7		20
2,4-Dimethylphenol	67		76		30-130	13		20
2-Nitrophenol	108		111		30-130	3		20
4-Nitrophenol	67		71		30-130	6		20
2,4-Dinitrophenol	119		128		30-130	7		20
Pentachlorophenol	97		101		30-130	4		20
Phenol	50		52		30-130	4		20
2-Methylphenol	69		74		30-130	7		20
3-Methylphenol/4-Methylphenol	71		77		30-130	8		20
2,4,5-Trichlorophenol	95		100		30-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	79		83		15-110
Phenol-d6	64		66		15-110
Nitrobenzene-d5	78		80		30-130
2-Fluorobiphenyl	81		85		30-130
2,4,6-Tribromophenol	**128**	Q	**135**	Q	15-110
4-Terphenyl-d14	82		88		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-04 Batch: WG1488187-2 WG1488187-3								
Acenaphthene	71		65		40-140	9		20
2-Chloronaphthalene	82		73		40-140	12		20
Fluoranthene	88		79		40-140	11		20
Hexachlorobutadiene	69		63		40-140	9		20
Naphthalene	67		61		40-140	9		20
Benzo(a)anthracene	78		69		40-140	12		20
Benzo(a)pyrene	96		88		40-140	9		20
Benzo(b)fluoranthene	74		70		40-140	6		20
Benzo(k)fluoranthene	96		89		40-140	8		20
Chrysene	87		83		40-140	5		20
Acenaphthylene	81		72		40-140	12		20
Anthracene	82		77		40-140	6		20
Benzo(ghi)perylene	96		90		40-140	6		20
Fluorene	76		69		40-140	10		20
Phenanthrene	67		63		40-140	6		20
Dibenzo(a,h)anthracene	106		98		40-140	8		20
Indeno(1,2,3-cd)pyrene	94		88		40-140	7		20
Pyrene	89		79		40-140	12		20
2-Methylnaphthalene	73		67		40-140	9		20
Pentachlorophenol	119		108		30-130	10		20
Hexachlorobenzene	76		72		40-140	5		20
Hexachloroethane	63		56		40-140	12		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-04 Batch: WG1488187-2 WG1488187-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	64		59		15-110
Phenol-d6	63		51		15-110
Nitrobenzene-d5	74		68		30-130
2-Fluorobiphenyl	79		72		30-130
2,4,6-Tribromophenol	**141**	Q	**123**	Q	15-110
4-Terphenyl-d14	98		83		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,11,13-14 Batch: WG1488529-2								
Perfluorooctanesulfonamide (FOSA)	87		-		46-170	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	107		-		10-185	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	110		-		10-202	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	103		-		10-209	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	107		-		66-176	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	70				10-112
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	43				10-161
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	40				10-160
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	58				10-189
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	55				10-187

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,11,13-14 Batch: WG1488529-2								
Perfluorobutanoic Acid (PFBA)	110		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	108		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	115		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	115		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	111		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	112		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	109		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	123		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	110		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	123		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	100		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	110		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	113		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	106		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	123		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	111		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	136		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	110		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	109		-		38-156	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	117		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	108		-		67-153	-		30
Perfluorotridecanoic Acid (PFTrDA)	119		-		48-158	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,11,13-14 Batch: WG1488529-2								
Perfluorotetradecanoic Acid (PFTA)	110		-		59-182	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	120		-		57-162	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	114		-		69-143	-		30
Perfluorohexadecanoic Acid (PFHxDA)	127		-		40-167	-		30
Perfluorooctadecanoic Acid (PFODA)	48		-		10-119	-		30
Perfluorododecane Sulfonic Acid (PFDoDS)	136		-		85-154	-		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	177		-		81-188	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	104		-		55-158	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	105		-		52-156	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119379

Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,11,13-14 Batch: WG1488529-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	87				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	103				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	108				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	107				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	93				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	91				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	98				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	86				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	108				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	82				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	88				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	125				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	60				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	87				55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	66				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	88				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	84				22-136
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	94				10-165
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	116				10-206

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 06-08 Batch: WG1488687-2 WG1488687-3								
Acenaphthene	67		69		40-140	3		20
1,2,4-Trichlorobenzene	61		61		40-140	0		20
Hexachlorobenzene	62		66		40-140	6		20
Bis(2-chloroethyl)ether	73		75		40-140	3		20
2-Chloronaphthalene	66		69		40-140	4		20
1,2-Dichlorobenzene	63		63		40-140	0		20
1,3-Dichlorobenzene	64		63		40-140	2		20
1,4-Dichlorobenzene	64		65		40-140	2		20
3,3'-Dichlorobenzidine	58		57		40-140	2		20
2,4-Dinitrotoluene	75		79		40-140	5		20
2,6-Dinitrotoluene	71		79		40-140	11		20
Azobenzene	68		73		40-140	7		20
Fluoranthene	71		76		40-140	7		20
4-Bromophenyl phenyl ether	62		67		40-140	8		20
Bis(2-chloroisopropyl)ether	72		73		40-140	1		20
Bis(2-chloroethoxy)methane	70		73		40-140	4		20
Hexachlorobutadiene	68		66		40-140	3		20
Hexachloroethane	68		68		40-140	0		20
Isophorone	70		73		40-140	4		20
Naphthalene	68		68		40-140	0		20
Nitrobenzene	82		81		40-140	1		20
Bis(2-ethylhexyl)phthalate	76		77		40-140	1		20
Butyl benzyl phthalate	75		82		40-140	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 06-08 Batch: WG1488687-2 WG1488687-3								
Di-n-butylphthalate	68		71		40-140	4		20
Di-n-octylphthalate	80		80		40-140	0		20
Diethyl phthalate	69		72		40-140	4		20
Dimethyl phthalate	68		72		40-140	6		20
Benzo(a)anthracene	76		78		40-140	3		20
Benzo(a)pyrene	92		94		40-140	2		20
Benzo(b)fluoranthene	81		83		40-140	2		20
Benzo(k)fluoranthene	85		83		40-140	2		20
Chrysene	75		75		40-140	0		20
Acenaphthylene	73		77		40-140	5		20
Anthracene	74		74		40-140	0		20
Benzo(ghi)perylene	80		79		40-140	1		20
Fluorene	67		71		40-140	6		20
Phenanthrene	72		73		40-140	1		20
Dibenzo(a,h)anthracene	79		79		40-140	0		20
Indeno(1,2,3-cd)pyrene	80		81		40-140	1		20
Pyrene	70		73		40-140	4		20
Aniline	**25**	Q	**24**	Q	40-140	4		20
4-Chloroaniline	51		45		40-140	13		20
Dibenzofuran	68		69		40-140	1		20
2-Methylnaphthalene	68		70		40-140	3		20
Acetophenone	71		74		40-140	4		20
2,4,6-Trichlorophenol	80		80		30-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 06-08 Batch: WG1488687-2 WG1488687-3								
2-Chlorophenol	72		75		30-130	4		20
2,4-Dichlorophenol	75		78		30-130	4		20
2,4-Dimethylphenol	80		80		30-130	0		20
2-Nitrophenol	95		98		30-130	3		20
4-Nitrophenol	70		78		30-130	11		20
2,4-Dinitrophenol	88		97		30-130	10		20
Pentachlorophenol	76		84		30-130	10		20
Phenol	58		61		30-130	5		20
2-Methylphenol	72		76		30-130	5		20
3-Methylphenol/4-Methylphenol	77		77		30-130	0		20
2,4,5-Trichlorophenol	77		78		30-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	81		82		15-110
Phenol-d6	67		69		15-110
Nitrobenzene-d5	80		83		30-130
2-Fluorobiphenyl	72		74		30-130
2,4,6-Tribromophenol	82		85		15-110
4-Terphenyl-d14	68		71		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 06-08 Batch: WG1488688-2 WG1488688-3								
Acenaphthene	73		78		40-140	7		20
2-Chloronaphthalene	71		76		40-140	7		20
Fluoranthene	78		80		40-140	3		20
Hexachlorobutadiene	70		78		40-140	11		20
Naphthalene	68		84		40-140	**21**	Q	20
Benzo(a)anthracene	72		77		40-140	7		20
Benzo(a)pyrene	75		78		40-140	4		20
Benzo(b)fluoranthene	81		77		40-140	5		20
Benzo(k)fluoranthene	78		84		40-140	7		20
Chrysene	82		84		40-140	2		20
Acenaphthylene	73		78		40-140	7		20
Anthracene	74		76		40-140	3		20
Benzo(ghi)perylene	75		80		40-140	6		20
Fluorene	77		86		40-140	11		20
Phenanthrene	74		77		40-140	4		20
Dibenzo(a,h)anthracene	77		84		40-140	9		20
Indeno(1,2,3-cd)pyrene	73		78		40-140	7		20
Pyrene	80		81		40-140	1		20
2-Methylnaphthalene	69		77		40-140	11		20
Pentachlorophenol	87		97		30-130	11		20
Hexachlorobenzene	75		76		40-140	1		20
Hexachloroethane	64		73		40-140	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 06-08 Batch: WG1488688-2 WG1488688-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	72		103		15-110
Phenol-d6	63		89		15-110
Nitrobenzene-d5	96		107		30-130
2-Fluorobiphenyl	70		77		30-130
2,4,6-Tribromophenol	106		109		15-110
4-Terphenyl-d14	83		84		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119379

Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-04,06-13,16 Batch: WG1488917-2 WG1488917-3								
1,4-Dioxane	99		104		40-140	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	52		53		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 09-13,16 Batch: WG1489093-2 WG1489093-3								
Acenaphthene	82		91		40-140	10		20
1,2,4-Trichlorobenzene	84		84		40-140	0		20
Hexachlorobenzene	99		108		40-140	9		20
Bis(2-chloroethyl)ether	79		74		40-140	7		20
2-Chloronaphthalene	88		92		40-140	4		20
1,2-Dichlorobenzene	83		77		40-140	8		20
1,3-Dichlorobenzene	79		72		40-140	9		20
1,4-Dichlorobenzene	79		74		40-140	7		20
3,3'-Dichlorobenzidine	55		88		40-140	**46**	Q	20
2,4-Dinitrotoluene	93		104		40-140	11		20
2,6-Dinitrotoluene	93		97		40-140	4		20
Azobenzene	95		108		40-140	13		20
Fluoranthene	88		106		40-140	19		20
4-Bromophenyl phenyl ether	99		102		40-140	3		20
Bis(2-chloroisopropyl)ether	67		67		40-140	0		20
Bis(2-chloroethoxy)methane	75		77		40-140	3		20
Hexachlorobutadiene	87		84		40-140	4		20
Hexachloroethane	79		72		40-140	9		20
Isophorone	81		81		40-140	0		20
Naphthalene	83		86		40-140	4		20
Nitrobenzene	79		83		40-140	5		20
Bis(2-ethylhexyl)phthalate	76		80		40-140	5		20
Butyl benzyl phthalate	80		94		40-140	16		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 09-13,16 Batch: WG1489093-2 WG1489093-3								
Di-n-butylphthalate	77		87		40-140	12		20
Di-n-octylphthalate	78		86		40-140	10		20
Diethyl phthalate	94		106		40-140	12		20
Dimethyl phthalate	98		102		40-140	4		20
Benzo(a)anthracene	86		101		40-140	16		20
Benzo(a)pyrene	104		131		40-140	**23**	Q	20
Benzo(b)fluoranthene	96		112		40-140	15		20
Benzo(k)fluoranthene	92		117		40-140	**24**	Q	20
Chrysene	92		108		40-140	16		20
Acenaphthylene	88		94		40-140	7		20
Anthracene	90		104		40-140	14		20
Benzo(ghi)perylene	96		132		40-140	**32**	Q	20
Fluorene	92		103		40-140	11		20
Phenanthrene	88		100		40-140	13		20
Dibenzo(a,h)anthracene	97		127		40-140	**27**	Q	20
Indeno(1,2,3-cd)pyrene	88		126		40-140	**36**	Q	20
Pyrene	86		103		40-140	18		20
Aniline	**17**	Q	49		40-140	**97**	Q	20
4-Chloroaniline	52		79		40-140	**41**	Q	20
Dibenzofuran	89		100		40-140	12		20
2-Methylnaphthalene	82		87		40-140	6		20
Acetophenone	84		84		40-140	0		20
2,4,6-Trichlorophenol	98		102		30-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 09-13,16 Batch: WG1489093-2 WG1489093-3								
2-Chlorophenol	87		92		30-130	6		20
2,4-Dichlorophenol	94		91		30-130	3		20
2,4-Dimethylphenol	84		80		30-130	5		20
2-Nitrophenol	95		98		30-130	3		20
4-Nitrophenol	82		92		30-130	11		20
2,4-Dinitrophenol	106		116		30-130	9		20
Pentachlorophenol	98		102		30-130	4		20
Phenol	62		66		30-130	6		20
2-Methylphenol	75		82		30-130	9		20
3-Methylphenol/4-Methylphenol	80		84		30-130	5		20
2,4,5-Trichlorophenol	102		109		30-130	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	91		92		15-110
Phenol-d6	69		71		15-110
Nitrobenzene-d5	82		84		30-130
2-Fluorobiphenyl	82		86		30-130
2,4,6-Tribromophenol	**123**	Q	**135**	Q	15-110
4-Terphenyl-d14	82		93		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 09-13,16 Batch: WG1489095-2 WG1489095-3								
Acenaphthene	56		52		40-140	7		20
2-Chloronaphthalene	58		53		40-140	9		20
Fluoranthene	62		63		40-140	2		20
Hexachlorobutadiene	58		50		40-140	15		20
Naphthalene	55		49		40-140	12		20
Benzo(a)anthracene	56		58		40-140	4		20
Benzo(a)pyrene	55		60		40-140	9		20
Benzo(b)fluoranthene	56		62		40-140	10		20
Benzo(k)fluoranthene	62		64		40-140	3		20
Chrysene	58		64		40-140	10		20
Acenaphthylene	58		54		40-140	7		20
Anthracene	55		57		40-140	4		20
Benzo(ghi)perylene	54		57		40-140	5		20
Fluorene	59		57		40-140	3		20
Phenanthrene	55		57		40-140	4		20
Dibenzo(a,h)anthracene	57		59		40-140	3		20
Indeno(1,2,3-cd)pyrene	53		56		40-140	6		20
Pyrene	65		65		40-140	0		20
2-Methylnaphthalene	56		50		40-140	11		20
Pentachlorophenol	76		74		30-130	3		20
Hexachlorobenzene	55		54		40-140	2		20
Hexachloroethane	51		45		40-140	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119379

Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 09-13,16 Batch: WG1489095-2 WG1489095-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	53		47		15-110
Phenol-d6	45		40		15-110
Nitrobenzene-d5	80		71		30-130
2-Fluorobiphenyl	56		49		30-130
2,4,6-Tribromophenol	86		89		15-110
4-Terphenyl-d14	69		72		30-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,11,13-14 QC Batch ID: WG1488529-3 WG1488529-4 QC Sample: L2119881-04 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	7.98	34.4	48.6	141		48.0	114		67-148	1		30
Perfluoropentanoic Acid (PFPeA)	23.4	34.4	63.8	**185**	Q	62.7	111		63-161	2		30
Perfluorobutanesulfonic Acid (PFBS)	6.62	30.6	42.8	140		43.1	117		65-157	1		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	32.2	40.6	126		38.7	117		37-219	5		30
Perfluorohexanoic Acid (PFHxA)	19.6	34.4	60.7	**176**	Q	58.7	111		69-168	3		30
Perfluoropentanesulfonic Acid (PFPeS)	0.577J	32.4	40.3	125		39.4	117		52-156	2		30
Perfluoroheptanoic Acid (PFHpA)	4.57	34.4	45.5	132		45.0	115		58-159	1		30
Perfluorohexanesulfonic Acid (PFHxS)	5.63	31.5	47.8	152		47.7	131		69-177	0		30
Perfluorooctanoic Acid (PFOA)	13.1	34.4	53.4	155		52.9	113		63-159	1		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	32.8	45.2	138		40.5	121		49-187	11		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	32.8	37.8	115		38.0	113		61-179	1		30
Perfluorononanoic Acid (PFNA)	7.31	34.4	47.8	139		47.8	115		68-171	0		30
Perfluorooctanesulfonic Acid (PFOS)	12.9	32	51.7	**162**	Q	49.3	111		52-151	5		30
Perfluorodecanoic Acid (PFDA)	0.998J	34.4	42.9	125		40.4	112		63-171	6		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	33	40.6	123		47.8	141		56-173	16		30
Perfluorononanesulfonic Acid (PFNS)	ND	33.1	38.9	117		39.5	116		48-150	2		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	34.4	44.3	129		45.4	129		60-166	2		30
Perfluoroundecanoic Acid (PFUnA)	ND	34.4	39.5	115		40.3	114		60-153	2		30
Perfluorodecanesulfonic Acid (PFDS)	ND	33.2	34.6	104		36.9	109		38-156	6		30
Perfluorooctanesulfonamide (FOSA)	1.35JF	34.4	34.1	95		35.9F	98		46-170	5		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	34.4	37.0	107		41.7	118		45-170	12		30
Perfluorododecanoic Acid (PFDoA)	ND	34.4	38.3	111		39.4	112		67-153	3		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,11,13-14 QC Batch ID: WG1488529-3 WG1488529-4 QC Sample: L2119881-04 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	34.4	43.8	127		43.6	124		48-158	0		30
Perfluorotetradecanoic Acid (PFTA)	ND	34.4	39.8	116		40.2	114		59-182	1		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	689	767	111		826	117		57-162	7		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	32.5	36.3	112		36.9	111		69-143	2		30
Perfluorohexadecanoic Acid (PFHxDA)	ND	34.4	48.0	139		47.4	134		40-167	1		30
Perfluorooctadecanoic Acid (PFODA)	ND	34.4	38.8	113		35.6	101		10-119	9		30
Perfluorododecane Sulfonic Acid (PFDoDS)	ND	33.3	42.8	128		42.9	126		85-154	0		30
1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS)	ND	33.2	54.9	165		46.4	137		81-188	17		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	32.1	35.0	109		35.0	107		55-158	0		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	32.5	33.4	103		36.0	108		52-156	7		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	344	356	103		377	107		10-185	6		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	344	356	103		372	106		10-202	4		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	344	338	98		368	104		10-209	8		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	344	358	104		383	109		66-176	7		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	109		110		10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	83		78		12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	100		96		14-147

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06,11,13-14 QC Batch ID: WG1488529-3 WG1488529-4 QC Sample: L2119881-04 Client ID: MS Sample

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	77		85		10-165
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d9-NEtFOSE)	54		53		10-187
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d7-NMeFOSE)	55		56		10-189
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	48		43		27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	46		43		24-116
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	54		54		10-160
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	57		53		10-161
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	82		79		55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	72		76		62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	66		72		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	69		73		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	92		95		71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	80		79		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	69		66		22-136
Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)	99		90		10-206
Perfluoro[13C4]Butanoic Acid (MPFBA)	70		73		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	83		89		62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	65		68		10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		92		69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	70		75		62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	68		74		59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	104		102		70-131

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-04,06-13,16 QC Batch ID: WG1488917-4 WG1488917-5 QC Sample: L2119379-07 Client ID: HB-13-04152021												
1,4-Dioxane	ND	4.81	5.29	110		5.06	109		30-140	4		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		44		15-110

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-01
Client ID: HA20-CMT-6D1-04142021
Sample Location: CONCORD, MA

Date Collected: 04/14/21 16:15
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Alkalinity, Bicarbonate	83.4		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 05:12	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/16/21 05:12	44,353.2	MR
Phosphorus, Total	0.030		mg/l	0.010	0.004	1	04/22/21 15:00	04/23/21 12:32	121,4500P-E	SD
Phosphorus, Orthophosphate	0.016		mg/l	0.005	0.001	1	-	04/16/21 08:04	121,4500P-E	AW
Dissolved Organic Carbon	1.2	J	mg/l	2.0	0.08	2	-	04/27/21 05:50	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	60.0		mg/l	5.00	0.839	10	-	04/26/21 22:59	44,300.0	SH
Fluoride	0.113		mg/l	0.050	0.037	1	-	04/26/21 19:33	44,300.0	SH
Sulfate	47.5		mg/l	1.00	0.454	1	-	04/26/21 19:33	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-02
Client ID: SW-2A-04142021
Sample Location: CONCORD, MA
Date Collected: 04/14/21 16:15
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:33	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/16/21 04:33	44,353.2	MR

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-03 Date Collected: 04/14/21 16:50
Client ID: OW-3-04142021 Date Received: 04/15/21
Sample Location: CONCORD, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:28	44,353.2	MR
Nitrogen, Nitrate	1.2		mg/l	0.10	0.023	1	-	04/16/21 04:28	44,353.2	MR

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-04
Date Collected: 04/14/21 17:55
Client ID: GZW-6-1-04142021
Date Received: 04/15/21
Sample Location: CONCORD, MA
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:30	44,353.2	MR
Nitrogen, Nitrate	3.2		mg/l	0.10	0.023	1	-	04/16/21 04:30	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-06
Client ID: MW-1-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 09:10
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:35	44,353.2	MR
Nitrogen, Nitrate	1.8		mg/l	0.10	0.023	1	-	04/16/21 04:35	44,353.2	MR

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-07
Client ID: HB-13-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 09:10
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Alkalinity, Bicarbonate	23.3		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:18	44,353.2	MR
Nitrogen, Nitrate	2.9		mg/l	0.10	0.023	1	-	04/16/21 04:18	44,353.2	MR
Phosphorus, Total	0.022		mg/l	0.010	0.004	1	04/22/21 15:00	04/23/21 12:33	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/16/21 23:16	121,4500P-E	AS
Dissolved Organic Carbon	0.85	J	mg/l	1.0	0.04	1	-	04/27/21 05:50	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	29.0		mg/l	0.500	0.083	1	-	04/26/21 23:11	44,300.0	SH
Fluoride	0.051		mg/l	0.050	0.037	1	-	04/26/21 23:11	44,300.0	SH
Sulfate	18.1		mg/l	1.00	0.454	1	-	04/26/21 23:11	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-08
Client ID: MW-SD-01-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 09:45
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Alkalinity, Bicarbonate	22.4		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:48	44,353.2	MR
Nitrogen, Nitrate	4.4		mg/l	0.10	0.023	1	-	04/16/21 04:48	44,353.2	MR
Phosphorus, Total	0.020		mg/l	0.010	0.004	1	04/22/21 15:00	04/23/21 12:36	121,4500P-E	SD
Phosphorus, Orthophosphate	0.015		mg/l	0.005	0.001	1	-	04/16/21 23:18	121,4500P-E	AS
Dissolved Organic Carbon	0.69	J	mg/l	1.0	0.04	1	-	04/27/21 05:50	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	26.5		mg/l	0.500	0.083	1	-	04/26/21 23:23	44,300.0	SH
Fluoride	0.086		mg/l	0.050	0.037	1	-	04/26/21 23:23	44,300.0	SH
Sulfate	21.3		mg/l	1.00	0.454	1	-	04/26/21 23:23	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-09
Client ID: HA20-CMT-2D1-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 10:20
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Alkalinity, Bicarbonate	127.		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:44	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/16/21 04:44	44,353.2	MR
Phosphorus, Total	0.095		mg/l	0.020	0.008	2	04/22/21 15:00	04/23/21 12:37	121,4500P-E	SD
Phosphorus, Orthophosphate	0.052		mg/l	0.005	0.001	1	-	04/16/21 23:18	121,4500P-E	AS
Dissolved Organic Carbon	22.		mg/l	10	0.43	10	-	04/27/21 05:50	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	52.5		mg/l	5.00	0.839	10	-	04/27/21 01:11	44,300.0	SH
Fluoride	0.482		mg/l	0.050	0.037	1	-	04/26/21 23:35	44,300.0	SH
Sulfate	239.		mg/l	10.0	4.54	10	-	04/27/21 01:11	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-10
Client ID: MW-BS54-04152021
Sample Location: CONCORD, MA

Date Collected: 04/15/21 12:50
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:32	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/16/21 04:32	44,353.2	MR
Anions by Ion Chromatography - Westborough Lab										
Chloride	10.4		mg/l	0.500	0.083	1	-	04/26/21 23:47	44,300.0	SH
Fluoride	0.180		mg/l	0.050	0.037	1	-	04/26/21 23:47	44,300.0	SH
Sulfate	117.		mg/l	10.0	4.54	10	-	04/27/21 01:24	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 3252H
Lab Number: L2119379
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-11
Client ID: EQ BLANK1-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 11:00
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/27/21 13:58	121,2320B	JB
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/27/21 13:58	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:31	44,353.2	MR
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/16/21 04:31	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/22/21 15:00	04/23/21 12:38	121,4500P-E	SD
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/16/21 23:19	121,4500P-E	AS
Dissolved Organic Carbon	0.21	J	mg/l	1.0	0.04	1	-	04/27/21 05:50	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	0.209	J	mg/l	0.500	0.083	1	-	04/27/21 00:11	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/27/21 00:11	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/27/21 00:11	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2119379
Project Number: 3252H **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-12
Client ID: MW-BS01-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 13:45
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:36	44,353.2	MR
Nitrogen, Nitrate	0.66		mg/l	0.10	0.023	1	-	04/16/21 04:36	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-13
Client ID: GZW-10-2-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 13:05
Date Received: 04/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Alkalinity, Bicarbonate	137.		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Nitrogen, Nitrite	0.033	J	mg/l	0.050	0.014	1	-	04/16/21 04:42	44,353.2	MR
Nitrogen, Nitrate	0.095	J	mg/l	0.10	0.023	1	-	04/16/21 04:42	44,353.2	MR
Phosphorus, Total	0.097		mg/l	0.010	0.004	1	04/22/21 15:00	04/23/21 12:40	121,4500P-E	SD
Phosphorus, Orthophosphate	0.066		mg/l	0.005	0.001	1	-	04/16/21 23:19	121,4500P-E	AS
Dissolved Organic Carbon	1.1		mg/l	1.0	0.04	1	-	04/27/21 05:50	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	14.2		mg/l	0.500	0.083	1	-	04/26/21 23:59	44,300.0	SH
Fluoride	0.091		mg/l	0.050	0.037	1	-	04/26/21 23:59	44,300.0	SH
Sulfate	274.		mg/l	10.0	4.54	10	-	04/27/21 01:37	44,300.0	SH

Project Name: NUCLEAR METALS
Lab Number: L2119379
Project Number: 3252H
Report Date: 04/29/21

SAMPLE RESULTS

Lab ID: L2119379-16
Client ID: GZW-11-2-04152021
Sample Location: CONCORD, MA
Date Collected: 04/15/21 16:05
Date Received: 04/15/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 04:41	44,353.2	MR
Nitrogen, Nitrate	0.031	J	mg/l	0.10	0.023	1	-	04/16/21 04:41	44,353.2	MR

Project Name: NUCLEAR METALS | **Lab Number:** L2119379
Project Number: 3252H | **Report Date:** 04/29/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04,06-11 Batch: WG1486896-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/16/21 03:23	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-04,06-11 Batch: WG1486897-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 03:25	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 12-13,16 Batch: WG1486898-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	04/16/21 03:28	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 12-13,16 Batch: WG1486900-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	04/16/21 03:34	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1486981-1										
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	04/16/21 08:03	121,4500P-E	AW
General Chemistry - Westborough Lab for sample(s): 07-09,11,13 Batch: WG1487336-1										
Phosphorus, Orthophosphate	0.002	J	mg/l	0.005	0.001	1	-	04/16/21 23:15	121,4500P-E	AS
General Chemistry - Westborough Lab for sample(s): 01,07-09,11,13 Batch: WG1489484-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	04/22/21 15:00	04/23/21 12:26	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01,07-09,13 Batch: WG1490739-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01,07-09,13 Batch: WG1490742-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/26/21 11:49	121,2320B	JB
Anions by Ion Chromatography - Westborough Lab for sample(s): 01,07-11,13 Batch: WG1491001-1										
Chloride	0.209	J	mg/l	0.500	0.083	1	-	04/26/21 18:33	44,300.0	SH
Fluoride	ND		mg/l	0.050	0.037	1	-	04/26/21 18:33	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	04/26/21 18:33	44,300.0	SH
General Chemistry - Westborough Lab for sample(s): 01,07-09,11,13 Batch: WG1491055-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	04/27/21 05:50	1,9060A	DW
General Chemistry - Westborough Lab for sample(s): 11 Batch: WG1491391-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/27/21 13:58	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 11 Batch: WG1491392-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	04/27/21 13:58	121,2320B	JB

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 Batch: WG1486896-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 Batch: WG1486897-2								
Nitrogen, Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 12-13,16 Batch: WG1486898-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 12-13,16 Batch: WG1486900-2								
Nitrogen, Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1486981-2								
Phosphorus, Orthophosphate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 07-09,11,13 Batch: WG1487336-2								
Phosphorus, Orthophosphate	90		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,07-09,11,13 Batch: WG1489484-2								
Phosphorus, Total	104		-		80-120	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 3252H

Lab Number: L2119379

Report Date: 04/29/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,07-11,13 Batch: WG1491001-2					
Chloride	103	-	90-110	-	
Fluoride	98	-	90-110	-	
Sulfate	102	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01,07-09,11,13 Batch: WG1491055-2					
Dissolved Organic Carbon	100	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 QC Batch ID: WG1486896-4 QC Sample: L2119379-07 Client ID: HB-13-04152021												
Nitrogen, Nitrate	2.9	4	6.5	90		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 QC Batch ID: WG1486897-4 QC Sample: L2119379-07 Client ID: HB-13-04152021												
Nitrogen, Nitrite	ND	4	4.4	110		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1486981-4 QC Sample: L2119379-01 Client ID: HA20-CMT-6D1-04142021												
Phosphorus, Orthophosphate	0.016	0.5	0.529	103		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 07-09,11,13 QC Batch ID: WG1487336-4 QC Sample: L2119379-07 Client ID: HB-13-04152021												
Phosphorus, Orthophosphate	ND	0.5	0.499	100		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,07-09,11,13 QC Batch ID: WG1489484-4 QC Sample: L2119379-07 Client ID: HB-13-04152021												
Phosphorus, Total	0.022	0.5	0.554	106		-	-		75-125	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,07-11,13 QC Batch ID: WG1491001-3 WG1491001-4 QC Sample: L2119379-07 Client ID: HB-13-04152021												
Chloride	29.0	4	31.9	**73**	Q	32.0	**75**	Q	90-110	0		18
Fluoride	0.051	0.4	0.386	**84**	Q	0.421	93		90-110	9		15
Sulfate	18.1	8	24.1	**75**	Q	24.1	**75**	Q	90-110	0		20
General Chemistry - Westborough Lab Associated sample(s): 01,07-09,11,13 QC Batch ID: WG1491055-4 QC Sample: L2119379-07 Client ID: HB-13-04152021												
Dissolved Organic Carbon	0.85J	4	5.2	**130**	Q	-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 QC Batch ID: WG1486896-3 QC Sample: L2119379-07 Client ID: HB-13-04152021						
Nitrogen, Nitrate	2.9	2.9	mg/l	0		6
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-11 QC Batch ID: WG1486897-3 QC Sample: L2119379-07 Client ID: HB-13-04152021						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1486981-3 QC Sample: L2119379-01 Client ID: HA20-CMT-6D1-04142021						
Phosphorus, Orthophosphate	0.016	0.017	mg/l	6		20
General Chemistry - Westborough Lab Associated sample(s): 07-09,11,13 QC Batch ID: WG1487336-3 QC Sample: L2119379-07 Client ID: HB-13-04152021						
Phosphorus, Orthophosphate	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01,07-09,11,13 QC Batch ID: WG1489484-3 QC Sample: L2119379-07 Client ID: HB-13-04152021						
Phosphorus, Total	0.022	0.048	mg/l	**74**	Q	20
General Chemistry - Westborough Lab Associated sample(s): 01,07-09,13 QC Batch ID: WG1490739-2 QC Sample: L2119379-07 Client ID: HB-13-04152021						
Alkalinity, Bicarbonate	23.3	24.2	mg CaCO3/L	4		9
General Chemistry - Westborough Lab Associated sample(s): 01,07-09,13 QC Batch ID: WG1490742-2 QC Sample: L2119379-07 Client ID: HB-13-04152021						
Alkalinity, Carbonate	ND	ND	mg CaCO3/L	NC		10

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,07-09,11,13 QC Batch ID: WG1491055-3 QC Sample: L2119379-07 Client ID: HB-13-04152021					
Dissolved Organic Carbon	0.85J	0.85J	mg/l	NC	20
General Chemistry - Westborough Lab Associated sample(s): 11 QC Batch ID: WG1491391-2 QC Sample: L2119379-11 Client ID: EQ BLANK1-04152021					
Alkalinity, Bicarbonate	ND	ND	mg CaCO3/L	NC	9
General Chemistry - Westborough Lab Associated sample(s): 11 QC Batch ID: WG1491392-2 QC Sample: L2119379-11 Client ID: EQ BLANK1-04152021					
Alkalinity, Carbonate	ND	ND	mg CaCO3/L	NC	10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119379-01A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-01B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-01C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-01D	Vial H2SO4 preserved	A	NA		4.3	Y	Absent		DOC-9060(28)
L2119379-01E	Vial H2SO4 preserved	A	NA		4.3	Y	Absent		DOC-9060(28)
L2119379-01F	Vial H2SO4 preserved	A	NA		4.3	Y	Absent		DOC-9060(28)
L2119379-01G	Plastic 250ml unpreserved/No Headspace	A	NA		4.3	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119379-01H	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-01I	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-01J	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-01K	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-01L	Plastic 250ml H2SO4 preserved	A	<2	<2	4.3	Y	Absent		TPHOS-4500(28)
L2119379-01M	Plastic 500ml unpreserved	A	7	7	4.3	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2119379-02A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-02B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-02C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-02D	Plastic 120ml unpreserved	A	7	7	4.3	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-02E	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-02F	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119379-02G	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-02H	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-03A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-03B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-03C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-03D	Plastic 120ml unpreserved	A	6	6	4.3	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-03E	Amber 250ml unpreserved	A	6	6	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-03F	Amber 250ml unpreserved	A	6	6	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-03G	Amber 250ml unpreserved	A	6	6	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-03H	Amber 250ml unpreserved	A	6	6	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-04A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-04B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-04C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-04D	Plastic 120ml unpreserved	A	6	6	4.3	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-04E	Amber 250ml unpreserved	A	6	6	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-04F	Amber 250ml unpreserved	A	6	6	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-04G	Amber 250ml unpreserved	A	6	6	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-04H	Amber 250ml unpreserved	A	6	6	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-05A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-05B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-06A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-06B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-06C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-06D	Plastic 250ml unpreserved	C	NA		4.9	Y	Absent		A2-537-ISOTOPE-36(14)
L2119379-06E	Plastic 250ml unpreserved	C	NA		4.9	Y	Absent		A2-537-ISOTOPE-36(14)
L2119379-06F	Plastic 120ml unpreserved	C	6	6	4.9	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-06G	Amber 250ml unpreserved	C	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-06H	Amber 250ml unpreserved	C	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119379-06I	Amber 250ml unpreserved	C	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-06J	Amber 250ml unpreserved	C	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-07A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-07A1	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-07A2	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-07B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-07B1	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-07B2	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-07C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-07C1	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-07C2	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-07D	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-07D1	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-07D2	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-07E	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-07E1	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-07E2	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-07F	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-07F1	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-07F2	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-07G	Plastic 120ml unpreserved	D	6	6	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-07G1	Plastic 120ml unpreserved	D	6	6	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-07G2	Plastic 120ml unpreserved	D	6	6	4.0	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-07H	Plastic 250ml unpreserved/No Headspace	D	NA		4.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119379-07H1	Plastic 250ml unpreserved/No Headspace	D	NA		4.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119379-07H2	Plastic 250ml unpreserved/No Headspace	D	NA		4.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119379-07I	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-07I1	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119379-07I2	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-07J	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-07J1	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-07J2	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-07K	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-07K1	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-07K2	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-07L	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-07L1	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-07L2	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-07M	Plastic 250ml H2SO4 preserved	D	<2	<2	4.0	Y	Absent		TPHOS-4500(28)
L2119379-07M1	Plastic 250ml H2SO4 preserved	D	<2	<2	4.0	Y	Absent		TPHOS-4500(28)
L2119379-07M2	Plastic 250ml H2SO4 preserved	D	<2	<2	4.0	Y	Absent		TPHOS-4500(28)
L2119379-07N	Plastic 500ml unpreserved	D	6	6	4.0	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28)
L2119379-07N1	Plastic 250ml unpreserved	D	6	6	4.0	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28)
L2119379-07N2	Plastic 250ml unpreserved	D	6	6	4.0	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28)
L2119379-08A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-08B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-08C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-08D	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-08E	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-08F	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-08G	Plastic 250ml unpreserved/No Headspace	D	NA		4.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119379-08H	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-08I	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-08J	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-08K	Amber 250ml unpreserved	D	6	6	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119379-08L	Plastic 250ml H2SO4 preserved	D	<2	<2	4.0	Y	Absent		TPHOS-4500(28)
L2119379-08M	Plastic 500ml unpreserved	D	6	6	4.0	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2119379-09A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-09B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-09C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-09D	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-09E	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-09F	Vial H2SO4 preserved	D	NA		4.0	Y	Absent		DOC-9060(28)
L2119379-09G	Plastic 250ml unpreserved/No Headspace	D	NA		4.0	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119379-09H	Amber 250ml unpreserved	D	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-09I	Amber 250ml unpreserved	D	7	7	4.0	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-09J	Amber 250ml unpreserved	D	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-09K	Amber 250ml unpreserved	D	7	7	4.0	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-09L	Plastic 250ml H2SO4 preserved	D	<2	<2	4.0	Y	Absent		TPHOS-4500(28)
L2119379-09M	Plastic 500ml unpreserved	D	7	7	4.0	Y	Absent		OPHOS-4500(2),SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2119379-10A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-10B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-10C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-10D	Plastic 120ml unpreserved	A	7	7	4.3	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-10E	Plastic 120ml unpreserved	A	7	7	4.3	Y	Absent		SO4-300(28),F-300(28),CL-300(28)
L2119379-10F	Plastic 120ml unpreserved	A	7	7	4.3	Y	Absent		SO4-300(28),F-300(28),CL-300(28)
L2119379-10G	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-10H	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-10I	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-10J	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-11A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-11B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-11C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119379-11D	Vial H2SO4 preserved	C	NA		4.9	Y	Absent		DOC-9060(28)
L2119379-11E	Vial H2SO4 preserved	C	NA		4.9	Y	Absent		DOC-9060(28)
L2119379-11F	Vial H2SO4 preserved	C	NA		4.9	Y	Absent		DOC-9060(28)
L2119379-11G	Plastic 250ml unpreserved	C	NA		4.9	Y	Absent		A2-537-ISOTOPE-36(14)
L2119379-11H	Plastic 250ml unpreserved	C	NA		4.9	Y	Absent		A2-537-ISOTOPE-36(14)
L2119379-11I	Plastic 120ml unpreserved	C	6	6	4.9	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-11J	Plastic 250ml unpreserved	C	6	6	4.9	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28)
L2119379-11K	Plastic 250ml unpreserved/No Headspace	C	NA		4.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119379-11L	Amber 250ml unpreserved	C	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-11M	Amber 250ml unpreserved	C	6	6	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-11N	Amber 250ml unpreserved	C	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-11O	Amber 250ml unpreserved	C	6	6	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-11P	Plastic 250ml H2SO4 preserved	C	<2	<2	4.9	Y	Absent		TPHOS-4500(28)
L2119379-12A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-12B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-12C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-12D	Plastic 120ml unpreserved	C	7	7	4.9	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-12E	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-12F	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-12G	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-12H	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-13A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-13B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-13C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-13D	Vial H2SO4 preserved	C	NA		4.9	Y	Absent		DOC-9060(28)
L2119379-13E	Vial H2SO4 preserved	C	NA		4.9	Y	Absent		DOC-9060(28)
L2119379-13F	Vial H2SO4 preserved	C	NA		4.9	Y	Absent		DOC-9060(28)
L2119379-13G	Plastic 250ml unpreserved	C	NA		4.9	Y	Absent		A2-537-ISOTOPE-36(14)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 3252H

Lab Number: L2119379
Report Date: 04/29/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2119379-13H	Plastic 250ml unpreserved	C	NA		4.9	Y	Absent		A2-537-ISOTOPE-36(14)
L2119379-13I	Plastic 250ml unpreserved/No Headspace	C	NA		4.9	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2119379-13J	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-13K	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-13L	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-13M	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-13N	Plastic 250ml H2SO4 preserved	C	<2	<2	4.9	Y	Absent		TPHOS-4500(28)
L2119379-13O	Plastic 500ml unpreserved	C	7	7	4.9	Y	Absent		OPHOS-4500(2),SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2119379-14A	Plastic 250ml unpreserved	C	NA		4.9	Y	Absent		A2-537-ISOTOPE-36(14)
L2119379-15A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-15B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-15C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-16A	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-16B	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-16C	Vial HCl preserved	B	NA		3.0	Y	Absent		MCP-8260-10(14)
L2119379-16D	Plastic 120ml unpreserved	C	7	7	4.9	Y	Absent		NO2-353(2),NO3-353(2)
L2119379-16E	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-16F	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		MCP-8270SIM-10-LVI(7),MCP-8270-10-LVI(7)
L2119379-16G	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2119379-16H	Amber 250ml unpreserved	C	7	7	4.9	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	NUCLEAR METALS	**Lab Number:**	L2119379
Project Number:	3252H	**Report Date:**	04/29/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF COUNTY

PAGE 1 OF 2

ALPHA ANALYTICAL
World Class Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-622-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/15/21

ALPHA Job #: L2119379

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
19379-01	HA20-CMT-6D1-04142021	4/14/21	16:15	GW	ELL	X	X	X	X	X	X	X	X	X					14
02	SW-2A-04142021	4/14/21	16:15	GW	PB	X	X	X	X										8
03	OW-3-04142021	4/14/21	16:50	GW	ZM	X	X	X	X										8
04	GZW-6-1-04142021	4/14/21	17:55	GW	DAP	X	X	X	X										8
05	Trip Blank1-04152021	4/12/21	–	TB	PC	X													2
06	MW-1-04152021	4/15/21	9:10	GW	ZM	X	X	X	X						X				10
07	HB-13-04152021	4/15/21	9:10	GW	PB	X	X	X	X	X	X	X	X	X				MS/MSD	45
08	MW-SD-01-04152021	4/15/21	9:45	GW	CF	X	X	X	X	X	X	X	X	X					14
09	HA20-CMT-2D1-04152021	4/15/21	10:20	GW	ELL	X	X	X	X	X	X	X	X	X					14
10	MW-BS54-04152021	4/15/21	12:50	GW	ZM	X	X	X	X				X						10

PLEASE ANSWER QUESTIONS ABOVE!

	VOC's	1,4-Dioxane	SVOC's	Nitrate / Nitrite	Total Phosphorous	Ortho-phosphate	Dissolved Organic Carbon	Total Anions	Alkalinity	PFAS		
Container Type	V	A	A	P	P	P	V	P	P	P	-	-
Preservative	B	A	A	A	D	A	D	A	A	O	-	-

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/15/2021 1700	[signature] Plum MAL	4/15/21 1700
[signature]	4/15/21 1745	[signature]	4/15/21 1745

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF COUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL
World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 4/15/21

ALPHA Job #: L2119379

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Nathan Hunt

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program	Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING

Filtration

☒ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (300)	Alkalinity (Carb/Bicarb) (SM 2320)	PFAS (537.1 I.D.)			Sample Specific Comments	TOTAL # BOTTLES
9379-11	EQ Blank1-04152021	4/15/21	11:00	GW	NH	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		14
12	MW-BS01-04152021	4/15/21	13:45	GW	CF	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
13	GZW-10-2-04152021	4/15/21	13:05	GW	FHM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		16
14	Field Blank1-04152021	4/15/21	13:10	FB	FHM	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐		2
15	MW-BS03-04152021	4/15/21	15:55	GW	SRB	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		3
16	GZW-11-2-04152021	4/15/202	16:15	GW	PB	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐		8
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	D	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/15/2021 1700	[signature] AAL	4/15/21 1700
[signature]	4/15/21 1745	[signature]	4/15/21 1745

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119379**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1487779-5**	**Lab File ID**	**: J210418A06**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/18/21 04:59**

Client Sample No.	Lab Sample ID	Analysis Date
WG1487779-3LCS	WG1487779-3	04/18/21 03:37
WG1487779-4LCSD	WG1487779-4	04/18/21 04:18
TRIP BLANK1-04152021	L2119379-05	04/18/21 09:07

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119379**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1491617-5**	**Lab File ID**	**: J210427N08**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/27/21 20:09**

Client Sample No.	Lab Sample ID	Analysis Date
WG1491617-3LCS	WG1491617-3	04/27/21 18:06
WG1491617-4LCSD	WG1491617-4	04/27/21 18:47
OW-3-04142021	L2119379-03	04/27/21 21:31
MW-SD-01-04152021	L2119379-08	04/27/21 22:12
MW-BS54-04152021	L2119379-10	04/27/21 22:54
MW-BS01-04152021	L2119379-12	04/27/21 23:35
GZW-11-2-04152021	L2119379-16	04/28/21 00:16
HB-13-04152021	L2119379-07	04/28/21 00:57
HB-13-04152021MS	WG1491617-6	04/28/21 01:38
HB-13-04152021MSD	WG1491617-7	04/28/21 02:20

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119379**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1491614-5**	**Lab File ID**	**: J210427N11**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 04/27/21 21:11**

Client Sample No.	Lab Sample ID	Analysis Date
WG1491614-3LCS	WG1491614-3	04/27/21 19:07
WG1491614-4LCSD	WG1491614-4	04/27/21 19:49
HA20-CMT-6D1-04142021	L2119379-01	04/27/21 21:52
SW-2A-04142021	L2119379-02	04/27/21 22:33
GZW-6-1-04142021	L2119379-04	04/27/21 23:14
HA20-CMT-2D1-04152021	L2119379-09	04/28/21 00:37
EQ BLANK1-04152021	L2119379-11	04/28/21 01:18
GZW-10-2-04152021	L2119379-13	04/28/21 01:59
MW-BS03-04152021	L2119379-15	04/28/21 02:40

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119379**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**
Lab Sample ID	**: WG1491733-5**	**Lab File ID**	**: VQ210428A04**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 04/28/21 05:37**

Client Sample No.	Lab Sample ID	Analysis Date
WG1491733-3LCS	WG1491733-3	04/28/21 04:07
WG1491733-4LCSD	WG1491733-4	04/28/21 04:37
MW-1-04152021	L2119379-06	04/28/21 06:07

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119379**		
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**		
Instrument ID	**: JACK**	**Calibration Date**	**: 04/18/21 03:37**		
Lab File ID	**: J210418A02**	**Init. Calib. Date(s)**	**: 04/06/21**	**04/06/21**	
Sample No	**: WG1487779-2**	**Init. Calib. Times**	**: 06:30**	**15:24**	
Channel	**:**				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	75	0
Dichlorodifluoromethane	0.988	1.086	-	-9.9	20	70	0
Chloromethane	1.815	2.136	-	-17.7	20	79	0
Vinyl chloride	2.051	2.277	-	-11	20	73	0
Bromomethane	10	10.67	-	-6.7	20	69	0
Chloroethane	1.105	1.395	-	-26.2*	20	83	0
Trichlorofluoromethane	1.917	2.079	-	-8.5	20	74	0
Ethyl ether	0.807	0.853	-	-5.7	20	74	0
1,1-Dichloroethene	1.166	1.277	-	-9.5	20	76	0
Carbon disulfide	3.943	4.577	-	-16.1	20	79	0
Freon-113	1.185	1.343	-	-13.3	20	80	0
Acrolein	0.199	0.243	-	-22.1*	20	83	-.01
Methylene chloride	1.4	1.617	-	-15.5	20	80	0
Acetone	0.45	0.612	-	-36*	20	92	0
trans-1,2-Dichloroethene	1.251	1.39	-	-11.1	20	77	0
Methyl acetate	1.243	1.615	-	-29.9*	20	91	0
Methyl tert-butyl ether	3.987	4.116	-	-3.2	20	73	0
tert-Butyl alcohol	0.133	0.148	-	-11.3	20	77	0
Diisopropyl ether	5.638	6.606	-	-17.2	20	82	0
1,1-Dichloroethane	3	3.704	-	-23.5*	20	83	0
Halothane	0.888	1.004	-	-13.1	20	79	0
Acrylonitrile	0.612	0.728	-	-19	20	83	0
Ethyl tert-butyl ether	4.868	5.124	-	-5.3	20	74	0
Vinyl acetate	4.411	5.182	-	-17.5	20	83	0
cis-1,2-Dichloroethene	1.456	1.572	-	-8	20	75	0
2,2-Dichloropropane	2.152	2.583	-	-20	20	84	0
Bromochloromethane	0.558	0.631	-	-13.1	20	79	0
Cyclohexane	3.001	3.608	-	-20.2*	20	84	0
Chloroform	2.538	2.963	-	-16.7	20	84	0
Ethyl acetate	1.761	1.915	-	-8.7	20	78	0
Carbon tetrachloride	10	11.32	-	-13.2	20	84	0
Tetrahydrofuran	0.488	0.641	-	-31.4*	20	84	-.02
Dibromofluoromethane	0.222	0.255	-	-14.9	20	84	0
1,1,1-Trichloroethane	2.006	2.335	-	-16.4	20	81	0
2-Butanone	0.78	0.969	-	-24.2*	20	86	0
1,1-Dichloropropene	2.054	2.293	-	-11.6	20	78	0
Benzene	6.159	6.753	-	-9.6	20	76	0
tert-Amyl methyl ether	4.072	3.926	-	3.6	20	70	0
1,2-Dichloroethane-d4	0.391	0.429	-	-9.7	20	85	0
1,2-Dichloroethane	2.102	2.535	-	-20.6*	20	83	0
Methyl cyclohexane	2.764	2.869	-	-3.8	20	73	0
Trichloroethene	1.41	1.514	-	-7.4	20	75	0
Dibromomethane	0.835	0.907	-	-8.6	20	77	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119379
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/18/21 03:37
Lab File ID	: J210418A02	Init. Calib. Date(s)	: 04/06/21 04/06/21
Sample No	: WG1487779-2	Init. Calib. Times	: 06:30 15:24
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	1.7	2.033	-	-19.6	20	83	0
2-Chloroethyl vinyl ether	1.061	1.031	-	2.8	20	71	0
Bromodichloromethane	1.958	2.254	-	-15.1	20	81	0
1,4-Dioxane	0.012	0.015*	-	-25*	20	82	-.01
cis-1,3-Dichloropropene	2.539	2.825	-	-11.3	20	79	0
Chlorobenzene-d5	1	1	-	0	20	73	0
Toluene-d8	1.312	1.362	-	-3.8	20	75	0
Toluene	4.715	5.083	-	-7.8	20	74	0
4-Methyl-2-pentanone	0.788	0.765	-	2.9	20	72	0
Tetrachloroethene	1.54	1.623	-	-5.4	20	76	0
trans-1,3-Dichloropropene	3.013	3.477	-	-15.4	20	79	0
Ethyl methacrylate	2.61	2.636	-	-1	20	73	0
1,1,2-Trichloroethane	1.482	1.678	-	-13.2	20	79	0
Chlorodibromomethane	1.493	1.619	-	-8.4	20	79	0
1,3-Dichloropropane	3.15	3.451	-	-9.6	20	76	0
1,2-Dibromoethane	1.509	1.54	-	-2.1	20	74	0
2-Hexanone	1.508	1.568	-	-4	20	79	0
Chlorobenzene	4.887	5.085	-	-4.1	20	74	0
Ethylbenzene	9.17	10.088	-	-10	20	75	0
1,1,1,2-Tetrachloroethane	1.509	1.604	-	-6.3	20	76	0
p/m Xylene	3.495	3.754	-	-7.4	20	75	0
o Xylene	3.273	3.532	-	-7.9	20	74	0
Styrene	5.609	6.246	-	-11.4	20	77	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	75	0
Bromoform	1.961	1.884	-	3.9	20	81	0
Isopropylbenzene	17.13	17.362	-	-1.4	20	74	0
4-Bromofluorobenzene	1.017	0.989	-	2.8	20	74	0
Bromobenzene	3.526	3.431	-	2.7	20	78	0
n-Propylbenzene	23.023	24.113	-	-4.7	20	74	0
1,4-Dichlorobutane	6.731	7.901	-	-17.4	20	81	0
1,1,2,2-Tetrachloroethane	10	12.106	-	-21.1*	20	76	0
4-Ethyltoluene	16.526	17.425	-	-5.4	20	75	0
2-Chlorotoluene	14.927	16.165	-	-8.3	20	77	0
1,3,5-Trimethylbenzene	14.394	14.661	-	-1.9	20	75	0
1,2,3-Trichloropropane	3.663	4.009	-	-9.4	20	73	0
trans-1,4-Dichloro-2-buten	1.458	1.585	-	-8.7	20	75	0
4-Chlorotoluene	13.502	14.357	-	-6.3	20	77	0
tert-Butylbenzene	11.747	11.943	-	-1.7	20	74	0
1,2,4-Trimethylbenzene	14.075	14.284	-	-1.5	20	74	0
sec-Butylbenzene	17.271	17.867	-	-3.5	20	74	0
p-Isopropyltoluene	14.764	14.681	-	0.6	20	73	0
1,3-Dichlorobenzene	7.29	7.525	-	-3.2	20	78	0
1,4-Dichlorobenzene	7.245	7.371	-	-1.7	20	78	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119379		
Project Name	: NUCLEAR METALS	Project Number	: 3252H		
Instrument ID	: JACK	Calibration Date	: 04/18/21 03:37		
Lab File ID	: J210418A02	Init. Calib. Date(s)	: 04/06/21	04/06/21	
Sample No	: WG1487779-2	Init. Calib. Times	: 06:30	15:24	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	8.496	8.257	-	2.8	20	73	0
n-Butylbenzene	15.567	16.396	-	-5.3	20	75	0
1,2-Dichlorobenzene	6.684	6.789	-	-1.6	20	77	0
1,2,4,5-Tetramethylbenzene	12.111	10.895	-	10	20	69	0
1,2-Dibromo-3-chloropropan	0.522	0.547	-	-4.8	20	80	0
1,3,5-Trichlorobenzene	4.178	4.113	-	1.6	20	80	0
Hexachlorobutadiene	1.414	1.471	-	-4	20	85	0
1,2,4-Trichlorobenzene	3.612	3.371	-	6.7	20	79	0
Naphthalene	11.584	10.713	-	7.5	20	74	0
1,2,3-Trichlorobenzene	3.388	3.248	-	4.1	20	80	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119379	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/27/21 18:06	
Lab File ID	: J210427N02	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1491617-2	Init. Calib. Times	: 06:28	13:17
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	77	0
Dichlorodifluoromethane	1.718	1.461	-	15	20	66	-.01
Chloromethane	2.239	2.441	-	-9	20	86	-.02
Vinyl chloride	2.099	2.121	-	-1	20	78	0
Bromomethane	10	9.567	-	4.3	20	70	0
Chloroethane	1.236	1.341	-	-8.5	20	84	-.01
Trichlorofluoromethane	2.886	3.264	-	-13.1	20	86	-.01
Ethyl ether	0.988	1.046	-	-5.9	20	88	0
1,1-Dichloroethene	1.62	1.875	-	-15.7	20	89	-.01
Carbon disulfide	4.976	5.542	-	-11.4	20	89	-.01
Freon-113	1.756	2.033	-	-15.8	20	88	-.01
Iodomethane	10	11.137	-	-11.4	20	120	-.01
Acrolein	0.256	0.28	-	-9.4	20	92	-.02
Methylene chloride	1.895	2.103	-	-11	20	92	0
Acetone	10	11.674	-	-16.7	20	96	-.01
trans-1,2-Dichloroethene	1.744	1.948	-	-11.7	20	90	-.01
Methyl acetate	1.686	1.822	-	-8.1	20	91	-.01
Methyl tert-butyl ether	4.666	4.891	-	-4.8	20	87	-.01
tert-Butyl alcohol	0.162	0.158	-	2.5	20	86	-.01
Diisopropyl ether	7.013	7.404	-	-5.6	20	88	-.01
1,1-Dichloroethane	3.687	4.104	-	-11.3	20	88	0
Halothane	1.455	1.58	-	-8.6	20	86	0
Acrylonitrile	0.743	0.841	-	-13.2	20	93	-.01
Ethyl tert-butyl ether	5.545	5.664	-	-2.1	20	86	0
Vinyl acetate	5.398	5.777	-	-7	20	91	0
cis-1,2-Dichloroethene	1.984	2.197	-	-10.7	20	88	0
2,2-Dichloropropane	2.857	3.247	-	-13.7	20	92	-.01
Bromochloromethane	0.938	1.043	-	-11.2	20	88	-.01
Cyclohexane	3.438	4.094	-	-19.1	20	91	0
Chloroform	3.496	3.921	-	-12.2	20	95	0
Ethyl acetate	2.26	2.413	-	-6.8	20	90	0
Carbon tetrachloride	2.608	3.06	-	-17.3	20	89	0
Tetrahydrofuran	0.702	0.774	-	-10.3	20	93	-.01
Dibromofluoromethane	0.274	0.282	-	-2.9	20	82	0
1,1,1-Trichloroethane	3.004	3.426	-	-14	20	90	0
2-Butanone	1.019	1.11	-	-8.9	20	94	0
1,1-Dichloropropene	2.493	2.672	-	-7.2	20	83	0
Benzene	7.147	7.668	-	-7.3	20	85	0
tert-Amyl methyl ether	4.722	4.565	-	3.3	20	87	0
1,2-Dichloroethane-d4	0.39	0.393	-	-0.8	20	84	0
1,2-Dichloroethane	2.743	3.098	-	-12.9	20	93	0
Methyl cyclohexane	3.393	3.637	-	-7.2	20	86	0
Trichloroethene	1.946	2.06	-	-5.9	20	84	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119379		
Project Name	: NUCLEAR METALS	Project Number	: 3252H		
Instrument ID	: JACK	Calibration Date	: 04/27/21 18:06		
Lab File ID	: J210427N02	Init. Calib. Date(s)	: 04/20/21	04/20/21	
Sample No	: WG1491617-2	Init. Calib. Times	: 06:28	13:17	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	1.192	1.302	-	-9.2	20	91	0
1,2-Dichloropropane	1.988	2.153	-	-8.3	20	91	0
2-Chloroethyl vinyl ether	10	9.142	-	8.6	20	83	0
Bromodichloromethane	2.635	2.896	-	-9.9	20	90	0
1,4-Dioxane	0.018	0.021*	-	-16.7	20	99	-.02
cis-1,3-Dichloropropene	3.055	3.256	-	-6.6	20	86	0
Chlorobenzene-d5	1	1	-	0	20	80	0
Toluene-d8	1.158	1.167	-	-0.8	20	79	0
Toluene	5.622	5.772	-	-2.7	20	87	0
4-Methyl-2-pentanone	10	9.343	-	6.6	20	84	0
Tetrachloroethene	2.601	2.747	-	-5.6	20	87	0
trans-1,3-Dichloropropene	3.254	3.544	-	-8.9	20	89	0
Ethyl methacrylate	2.644	2.627	-	0.6	20	87	0
1,1,2-Trichloroethane	1.582	1.686	-	-6.6	20	87	0
Chlorodibromomethane	2.288	2.35	-	-2.7	20	89	0
1,3-Dichloropropane	3.34	3.421	-	-2.4	20	86	0
1,2-Dibromoethane	1.93	1.995	-	-3.4	20	87	0
2-Hexanone	1.669	1.661	-	0.5	20	90	0
Chlorobenzene	6.368	6.724	-	-5.6	20	86	0
Ethylbenzene	10.067	11.74	-	-16.6	20	88	0
1,1,1,2-Tetrachloroethane	2.308	2.339	-	-1.3	20	85	0
p/m Xylene	4.037	4.695	-	-16.3	20	88	0
o Xylene	20	21.032	-	-5.2	20	86	0
Styrene	20	21.903	-	-9.5	20	88	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	80	0
Bromoform	2.777	2.752	-	0.9	20	87	0
Isopropylbenzene	18.605	19.855	-	-6.7	20	87	0
4-Bromofluorobenzene	0.806	0.788	-	2.2	20	79	0
Bromobenzene	4.765	4.961	-	-4.1	20	90	0
n-Propylbenzene	22.882	24.871	-	-8.7	20	87	0
1,4-Dichlorobutane	6.578	6.927	-	-5.3	20	91	0
1,1,2,2-Tetrachloroethane	10	10.584	-	-5.8	20	87	0
4-Ethyltoluene	17.854	19.537	-	-9.4	20	88	0
2-Chlorotoluene	15.287	16.664	-	-9	20	89	0
1,3,5-Trimethylbenzene	15.64	16.686	-	-6.7	20	87	0
1,2,3-Trichloropropane	3.625	3.749	-	-3.4	20	87	0
trans-1,4-Dichloro-2-buten	1.546	1.477	-	4.5	20	84	0
4-Chlorotoluene	13.902	14.981	-	-7.8	20	90	0
tert-Butylbenzene	13.881	14.999	-	-8.1	20	88	0
1,2,4-Trimethylbenzene	15.244	16.277	-	-6.8	20	87	0
sec-Butylbenzene	18.87	20.605	-	-9.2	20	88	0
p-Isopropyltoluene	10	10.186	-	-1.9	20	88	0
1,3-Dichlorobenzene	9.524	10.103	-	-6.1	20	90	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2119379
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H
Instrument ID	: JACK	**Calibration Date**	: 04/27/21 18:06
Lab File ID	: J210427N02	**Init. Calib. Date(s)**	: 04/20/21 04/20/21
Sample No	: WG1491617-2	**Init. Calib. Times**	: 06:28 13:17
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	9.417	10.013	-	-6.3	20	91	0
p-Diethylbenzene	10.288	10.412	-	-1.2	20	87	0
n-Butylbenzene	15.665	17.335	-	-10.7	20	89	0
1,2-Dichlorobenzene	8.844	9.214	-	-4.2	20	91	0
1,2,4,5-Tetramethylbenzene	10	9.233	-	7.7	20	87	0
1,2-Dibromo-3-chloropropan	0.769	0.761	-	1	20	87	0
1,3,5-Trichlorobenzene	6.153	6.857	-	-11.4	20	95	0
Hexachlorobutadiene	2.422	2.755	-	-13.7	20	96	0
1,2,4-Trichlorobenzene	5.391	5.644	-	-4.7	20	93	0
Naphthalene	10	9.329	-	6.7	20	87	0
1,2,3-Trichlorobenzene	5.031	5.383	-	-7	20	92	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119379	
Project Name	: NUCLEAR METALS	Project Number	: 3252H	
Instrument ID	: JACK	Calibration Date	: 04/27/21 19:07	
Lab File ID	: J210427N05	Init. Calib. Date(s)	: 04/20/21	04/20/21
Sample No	: WG1491614-2	Init. Calib. Times	: 06:07	12:57
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	85	0
Dichlorodifluoromethane	1.542	1.382	-	10.4	20	67	0
Chloromethane	2.252	2.273	-	-0.9	20	81	0
Vinyl chloride	1.971	2.01	-	-2	20	77	0
Bromomethane	10	8.492	-	15.1	20	68	0
Chloroethane	1.198	1.311	-	-9.4	20	85	0
Trichlorofluoromethane	2.788	3.149	-	-12.9	20	87	0
Ethyl ether	0.889	1.024	-	-15.2	20	95	0
1,1-Dichloroethene	1.608	1.75	-	-8.8	20	86	0
Carbon disulfide	4.761	5.337	-	-12.1	20	88	0
Freon-113	1.7	1.931	-	-13.6	20	89	0
Iodomethane	10	10.083	-	-0.8	20	109	0
Acrolein	0.207	0.231	-	-11.6	20	98	0
Methylene chloride	1.728	2.069	-	-19.7	20	95	0
Acetone	0.545	0.635	-	-16.5	20	96	0
trans-1,2-Dichloroethene	1.648	1.869	-	-13.4	20	91	0
Methyl acetate	1.373	1.56	-	-13.6	20	92	0
Methyl tert-butyl ether	4.021	4.396	-	-9.3	20	94	0
tert-Butyl alcohol	0.114	0.13	-	-14	20	97	0
Diisopropyl ether	6.261	6.82	-	-8.9	20	93	0
1,1-Dichloroethane	3.488	3.977	-	-14	20	90	0
Halothane	1.371	1.571	-	-14.6	20	90	0
Acrylonitrile	0.624	0.725	-	-16.2	20	94	0
Ethyl tert-butyl ether	4.857	5.095	-	-4.9	20	89	0
Vinyl acetate	4.497	5.029	-	-11.8	20	101	0
cis-1,2-Dichloroethene	1.889	2.074	-	-9.8	20	88	0
2,2-Dichloropropane	2.736	3.121	-	-14.1	20	95	0
Bromochloromethane	0.897	1.025	-	-14.3	20	91	0
Cyclohexane	3.267	3.915	-	-19.8	20	91	0
Chloroform	3.289	3.648	-	-10.9	20	86	0
Ethyl acetate	1.775	1.917	-	-8	20	93	0
Carbon tetrachloride	2.644	2.912	-	-10.1	20	89	0
Tetrahydrofuran	0.539	0.635	-	-17.8	20	95	0
Dibromofluoromethane	0.29	0.292	-	-0.7	20	91	0
1,1,1-Trichloroethane	2.893	3.222	-	-11.4	20	90	0
2-Butanone	0.765	0.865	-	-13.1	20	93	0
1,1-Dichloropropene	2.301	2.562	-	-11.3	20	89	0
Benzene	6.631	7.14	-	-7.7	20	88	0
tert-Amyl methyl ether	3.944	4.057	-	-2.9	20	90	0
1,2-Dichloroethane-d4	0.391	0.368	-	5.9	20	85	0
1,2-Dichloroethane	2.572	2.86	-	-11.2	20	91	0
Methyl cyclohexane	3.073	3.348	-	-8.9	20	91	0
Trichloroethene	1.748	1.947	-	-11.4	20	89	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119379
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: JACK	Calibration Date	: 04/27/21 19:07
Lab File ID	: J210427N05	Init. Calib. Date(s)	: 04/20/21 04/20/21
Sample No	: WG1491614-2	Init. Calib. Times	: 06:07 12:57
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	1.104	1.21	-	-9.6	20	92	0
1,2-Dichloropropane	1.79	1.978	-	-10.5	20	93	0
2-Chloroethyl vinyl ether	0.967	0.938	-	3	20	94	0
Bromodichloromethane	2.457	2.765	-	-12.5	20	92	0
1,4-Dioxane	0.012	0.015*	-	-25*	20	112	0
cis-1,3-Dichloropropene	2.784	3.085	-	-10.8	20	91	0
Chlorobenzene-d5	1	1	-	0	20	83	0
Toluene-d8	1.15	1.211	-	-5.3	20	87	0
Toluene	4.965	5.628	-	-13.4	20	90	0
4-Methyl-2-pentanone	0.596	0.654	-	-9.7	20	97	0
Tetrachloroethene	2.321	2.657	-	-14.5	20	92	0
trans-1,3-Dichloropropene	10	10.676	-	-6.8	20	89	0
Ethyl methacrylate	2.129	2.459	-	-15.5	20	92	0
1,1,2-Trichloroethane	1.356	1.507	-	-11.1	20	91	0
Chlorodibromomethane	1.961	2.11	-	-7.6	20	89	0
1,3-Dichloropropane	2.782	3.055	-	-9.8	20	89	0
1,2-Dibromoethane	1.63	1.772	-	-8.7	20	89	0
2-Hexanone	1.263	1.434	-	-13.5	20	94	0
Chlorobenzene	5.757	6.527	-	-13.4	20	91	0
Ethylbenzene	9.387	11.38	-	-21.2*	20	90	0
1,1,1,2-Tetrachloroethane	1.992	2.201	-	-10.5	20	93	0
p/m Xylene	3.789	4.605	-	-21.5*	20	88	0
o Xylene	3.595	4.347	-	-20.9*	20	90	0
Styrene	20	23.16	-	-15.8	20	88	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	80	0
Bromoform	2.359	2.524	-	-7	20	94	0
Isopropylbenzene	17.473	19.992	-	-14.4	20	89	0
4-Bromofluorobenzene	0.8	0.82	-	-2.5	20	85	0
Bromobenzene	4.366	4.871	-	-11.6	20	93	0
n-Propylbenzene	21.642	24.985	-	-15.4	20	87	0
1,4-Dichlorobutane	5.544	6.221	-	-12.2	20	90	0
1,1,2,2-Tetrachloroethane	3.387	3.721	-	-9.9	20	90	0
4-Ethyltoluene	16.921	19.566	-	-15.6	20	88	0
2-Chlorotoluene	14.23	16.664	-	-17.1	20	88	0
1,3,5-Trimethylbenzene	14.552	16.586	-	-14	20	88	0
1,2,3-Trichloropropane	3.058	3.311	-	-8.3	20	90	0
trans-1,4-Dichloro-2-buten	1.252	1.271	-	-1.5	20	80	0
4-Chlorotoluene	13.04	15.266	-	-17.1	20	91	0
tert-Butylbenzene	12.872	14.895	-	-15.7	20	88	0
1,2,4-Trimethylbenzene	13.954	15.84	-	-13.5	20	89	0
sec-Butylbenzene	17.612	20.355	-	-15.6	20	87	0
p-Isopropyltoluene	10	10.984	-	-9.8	20	89	0
1,3-Dichlorobenzene	8.882	10.126	-	-14	20	90	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2119379		
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H		
Instrument ID	: JACK	**Calibration Date**	: 04/27/21 19:07		
Lab File ID	: J210427N05	**Init. Calib. Date(s)**	: 04/20/21	04/20/21	
Sample No	: WG1491614-2	**Init. Calib. Times**	: 06:07	12:57	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	8.812	10.032	-	-13.8	20	90	0
p-Diethylbenzene	9.399	10.126	-	-7.7	20	89	0
n-Butylbenzene	14.08	16.324	-	-15.9	20	88	0
1,2-Dichlorobenzene	8.245	9.062	-	-9.9	20	89	0
1,2,4,5-Tetramethylbenzene	10	10.229	-	-2.3	20	91	0
1,2-Dibromo-3-chloropropan	0.605	0.701	-	-15.9	20	94	0
1,3,5-Trichlorobenzene	5.579	6.284	-	-12.6	20	93	0
Hexachlorobutadiene	2.239	2.591	-	-15.7	20	92	0
1,2,4-Trichlorobenzene	4.502	5.057	-	-12.3	20	97	0
Naphthalene	10.045	10.417	-	-3.7	20	91	0
1,2,3-Trichlorobenzene	4.247	4.681	-	-10.2	20	94	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2119379		
Project Name	: NUCLEAR METALS	**Project Number**	: 3252H		
Instrument ID	: QUIMBY	**Calibration Date**	: 04/28/21 04:07		
Lab File ID	: VQ210428A01	**Init. Calib. Date(s)**	: 04/11/21	04/11/21	
Sample No	: WG1491733-2	**Init. Calib. Times**	: 16:44	21:47	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	87	0
Dichlorodifluoromethane	0.715	0.651	-	9	20	73	0
Chloromethane	1.089	1.075	-	1.3	20	81	0
Vinyl chloride	0.844	0.856	-	-1.4	20	82	0
Bromomethane	0.461	0.479	-	-3.9	20	86	0
Chloroethane	0.521	0.511	-	1.9	20	80	0
Trichlorofluoromethane	1.198	1.211	-	-1.1	20	83	0
Ethyl ether	0.275	0.272	-	1.1	20	84	0
1,1-Dichloroethene	0.654	0.617	-	5.7	20	79	0
Carbon disulfide	1.842	1.752	-	4.9	20	80	0
Freon-113	0.676	0.667	-	1.3	20	79	0
Methylene chloride	0.709	0.684	-	3.5	20	80	0
Acetone	10	11.17	-	-11.7	20	98	0
trans-1,2-Dichloroethene	0.781	0.72	-	7.8	20	76	0
Methyl acetate	0.359	0.394	-	-9.7	20	96	0
Methyl tert-butyl ether	1.417	1.424	-	-0.5	20	87	0
tert-Butyl alcohol	0.032	0.031*	-	3.1	20	86	0
Diisopropyl ether	2.883	3.196	-	-10.9	20	94	0
1,1-Dichloroethane	1.547	1.564	-	-1.1	20	84	0
Halothane	0.653	0.585	-	10.4	20	74	0
Acrylonitrile	0.149	0.158	-	-6	20	90	0
Ethyl tert-butyl ether	2.062	2.173	-	-5.4	20	90	0
Vinyl acetate	1.554	1.793	-	-15.4	20	98	0
cis-1,2-Dichloroethene	0.828	0.775	-	6.4	20	78	0
2,2-Dichloropropane	1.253	1.36	-	-8.5	20	90	0
Bromochloromethane	0.339	0.314	-	7.4	20	77	0
Cyclohexane	1.756	1.792	-	-2.1	20	87	0
Chloroform	1.426	1.402	-	1.7	20	82	0
Ethyl acetate	0.479	0.535	-	-11.7	20	96	0
Carbon tetrachloride	1.277	1.254	-	1.8	20	80	0
Tetrahydrofuran	0.171	0.187	-	-9.4	20	95	0
Dibromofluoromethane	0.291	0.282	-	3.1	20	83	0
1,1,1-Trichloroethane	1.461	1.445	-	1.1	20	82	0
2-Butanone	0.19	0.214	-	-12.6	20	94	0
1,1-Dichloropropene	1.115	1.115	-	0	20	83	0
Benzene	3.027	2.985	-	1.4	20	81	0
tert-Amyl methyl ether	1.521	1.509	-	0.8	20	85	0
1,2-Dichloroethane-d4	0.282	0.315	-	-11.7	20	101	0
1,2-Dichloroethane	0.858	0.936	-	-9.1	20	92	0
Methyl cyclohexane	1.55	1.486	-	4.1	20	80	0
Trichloroethene	0.896	0.815	-	9	20	78	0
Dibromomethane	0.344	0.333	-	3.2	20	80	0
1,2-Dichloropropane	0.753	0.77	-	-2.3	20	85	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2119379
Project Name	: NUCLEAR METALS	Project Number	: 3252H
Instrument ID	: QUIMBY	Calibration Date	: 04/28/21 04:07
Lab File ID	: VQ210428A01	Init. Calib. Date(s)	: 04/11/21 04/11/21
Sample No	: WG1491733-2	Init. Calib. Times	: 16:44 21:47
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Bromodichloromethane	0.987	0.981	-	0.6	20	84	0
1,4-Dioxane	0.00307	0.00271*	-	11.7	20	76	0
cis-1,3-Dichloropropene	1.059	1.1	-	-3.9	20	88	0
Chlorobenzene-d5	1	1	-	0	20	75	-.01
Toluene-d8	1.077	1.158	-	-7.5	20	82	0
Toluene	1.629	1.747	-	-7.2	20	77	0
4-Methyl-2-pentanone	10	10.285	-	-2.9	20	89	0
Tetrachloroethene	0.709	0.695	-	2	20	71	0
trans-1,3-Dichloropropene	0.736	0.841	-	-14.3	20	85	0
Ethyl methacrylate	10	9.823	-	1.8	20	82	0
1,1,2-Trichloroethane	0.325	0.359	-	-10.5	20	81	0
Chlorodibromomethane	0.512	0.53	-	-3.5	20	77	0
1,3-Dichloropropane	0.692	0.762	-	-10.1	20	82	0
1,2-Dibromoethane	0.368	0.391	-	-6.3	20	80	0
2-Hexanone	10	10.749	-	-7.5	20	93	0
Chlorobenzene	1.757	1.776	-	-1.1	20	73	0
Ethylbenzene	3.145	3.485	-	-10.8	20	76	0
1,1,1,2-Tetrachloroethane	0.626	0.647	-	-3.4	20	76	0
p/m Xylene	20	20.523	-	-2.6	20	77	-.01
o Xylene	20	20.894	-	-4.5	20	79	-.01
Styrene	20	20.809	-	-4	20	79	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	87	0
Bromoform	0.517	0.471	-	8.9	20	76	0
Isopropylbenzene	6.172	6.003	-	2.7	20	76	-.01
4-Bromofluorobenzene	0.997	0.911	-	8.6	20	79	0
Bromobenzene	1.257	1.11	-	11.7	20	72	0
n-Propylbenzene	6.845	7.514	-	-9.8	20	89	0
1,4-Dichlorobutane	1.486	1.56	-	-5	20	87	0
1,1,2,2-Tetrachloroethane	0.764	0.729	-	4.6	20	79	0
4-Ethyltoluene	5.065	5.791	-	-14.3	20	95	0
2-Chlorotoluene	4.764	4.975	-	-4.4	20	86	-.01
1,3,5-Trimethylbenzene	3.876	5.025	-	-29.6*	20	109	0
1,2,3-Trichloropropane	0.635	0.649	-	-2.2	20	85	0
trans-1,4-Dichloro-2-buten	0.258	0.277	-	-7.4	20	93	0
4-Chlorotoluene	4.01	4.417	-	-10.1	20	92	0
tert-Butylbenzene	4.263	4.46	-	-4.6	20	85	0
1,2,4-Trimethylbenzene	3.462	4.723	-	-36.4*	20	114	0
sec-Butylbenzene	5.424	5.917	-	-9.1	20	89	0
p-Isopropyltoluene	10	10.931	-	-9.3	20	101	0
1,3-Dichlorobenzene	2.441	2.452	-	-0.5	20	83	0
1,4-Dichlorobenzene	2.306	2.398	-	-4	20	88	0
p-Diethylbenzene	2.449	2.969	-	-21.2*	20	108	0
n-Butylbenzene	10	12.948	-	-29.5*	20	117	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2119379**		
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 3252H**		
Instrument ID	**: QUIMBY**	**Calibration Date**	**: 04/28/21 04:07**		
Lab File ID	**: VQ210428A01**	**Init. Calib. Date(s)**	**: 04/11/21**	**04/11/21**	
Sample No	**: WG1491733-2**	**Init. Calib. Times**	**: 16:44**	**21:47**	
Channel	**:**				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichlorobenzene	2.108	2.157	-	-2.3	20	84	0
1,2,4,5-Tetramethylbenzene	2.863	3.26	-	-13.9	20	80	0
1,2-Dibromo-3-chloropropan	0.11	0.091	-	17.3	20	68	0
1,3,5-Trichlorobenzene	1.16	1.451	-	-25.1*	20	105	0
Hexachlorobutadiene	0.787	0.659	-	16.3	20	73	0
1,2,4-Trichlorobenzene	0.939	1.036	-	-10.3	20	99	0
Naphthalene	1.416	1.432	-	-1.1	20	84	0
1,2,3-Trichlorobenzene	0.783	0.894	-	-14.2	20	93	0

*** Value outside of QC limits.**

ANALYTICAL REPORT

Lab Number:	L2138148
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	131884-004
Report Date:	07/23/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138148
Report Date: 07/23/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2138148-01	HA20-CMT-4D3-07152021	WATER	CONCORD, MA	07/15/21 11:00	07/15/21
L2138148-02	HA20-CMT-5D1-07152021	WATER	CONCORD, MA	07/15/21 12:20	07/15/21
L2138148-03	HA20-CMT-5D3-07152021	WATER	CONCORD, MA	07/15/21 14:10	07/15/21

Project Name:	NUCLEAR METALS	Lab Number:	L2138148
Project Number:	131884-004	Report Date:	07/23/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

Non-MCP Related Narratives

Dissolved Organic Carbon

The samples were field filtered; a filter blank was not received.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 07/23/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138148
Report Date: 07/23/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

ORGANICS

SEMIVOLATILES

Project Name: NUCLEAR METALS | **Lab Number:** L2138148
Project Number: 131884-004 | **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138148-01
Client ID: HA20-CMT-4D3-07152021
Sample Location: CONCORD, MA
Date Collected: 07/15/21 11:00
Date Received: 07/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/22/21 14:02
Analyst: DB
Extraction Method: EPA 3510C
Extraction Date: 07/21/21 20:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	1.80		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138148
Project Number:	131884-004	**Report Date:**	07/23/21

SAMPLE RESULTS

Lab ID:	L2138148-02	Date Collected:	07/15/21 12:20
Client ID:	HA20-CMT-5D1-07152021	Date Received:	07/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	07/21/21 20:45
Analytical Date:	07/22/21 14:23		
Analyst:	DB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2138148

Project Number: 131884-004 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID:	L2138148-03	Date Collected:	07/15/21 14:10
Client ID:	HA20-CMT-5D3-07152021	Date Received:	07/15/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	07/21/21 20:45
Analytical Date:	07/22/21 14:44		
Analyst:	DB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.172		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	40		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2138148
Project Number: 131884-004 | **Report Date:** 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 07/22/21 13:01
Analyst: DB

Extraction Method: EPA 3510C
Extraction Date: 07/21/21 20:45

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1526488-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	39		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 131884-004

Lab Number: L2138148

Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1526488-2 WG1526488-3								
1,4-Dioxane	96		100		40-140	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	39		49		15-110

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138148
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138148-01
Client ID: HA20-CMT-4D3-07152021
Sample Location: CONCORD, MA

Date Collected: 07/15/21 11:00
Date Received: 07/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/16/21 11:40	121,2320B	JB
Alkalinity, Bicarbonate	96.3		mg CaCO3/L	2.00	NA	1	-	07/16/21 11:40	121,2320B	JB
Nitrogen, Nitrite	0.48		mg/l	0.050	0.014	1	-	07/16/21 06:09	44,353.2	EL
Nitrogen, Nitrate	1.1		mg/l	0.10	0.023	1	-	07/16/21 06:09	44,353.2	EL
Dissolved Organic Carbon	3.7		mg/l	2.0	0.08	2	-	07/22/21 05:24	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	45.8		mg/l	1.00	0.168	2	-	07/21/21 18:55	44,300.0	JT
Fluoride	0.149		mg/l	0.100	0.074	2	-	07/22/21 07:46	44,300.0	SH
Sulfate	83.6		mg/l	2.00	0.908	2	-	07/21/21 18:55	44,300.0	JT

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138148
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138148-02
Client ID: HA20-CMT-5D1-07152021
Sample Location: CONCORD, MA

Date Collected: 07/15/21 12:20
Date Received: 07/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/16/21 11:40	121,2320B	JB
Alkalinity, Bicarbonate	27.0		mg CaCO3/L	2.00	NA	1	-	07/16/21 11:40	121,2320B	JB
Nitrogen, Nitrite	0.022	J	mg/l	0.050	0.014	1	-	07/16/21 06:10	44,353.2	EL
Nitrogen, Nitrate	3.1		mg/l	0.10	0.023	1	-	07/16/21 06:10	44,353.2	EL
Dissolved Organic Carbon	0.44	J	mg/l	1.0	0.04	1	-	07/22/21 05:24	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	81.6		mg/l	5.00	0.839	10	-	07/21/21 22:33	44,300.0	JT
Fluoride	ND		mg/l	0.050	0.037	1	-	07/22/21 07:57	44,300.0	SH
Sulfate	16.7		mg/l	1.00	0.454	1	-	07/21/21 18:07	44,300.0	JT

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138148
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138148-03
Client ID: HA20-CMT-5D3-07152021
Sample Location: CONCORD, MA

Date Collected: 07/15/21 14:10
Date Received: 07/15/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/16/21 11:40	121,2320B	JB
Alkalinity, Bicarbonate	67.7		mg CaCO3/L	2.00	NA	1	-	07/16/21 11:40	121,2320B	JB
Nitrogen, Nitrite	0.061		mg/l	0.050	0.014	1	-	07/16/21 06:11	44,353.2	EL
Nitrogen, Nitrate	0.21		mg/l	0.10	0.023	1	-	07/16/21 06:11	44,353.2	EL
Dissolved Organic Carbon	0.38	J	mg/l	1.0	0.04	1	-	07/22/21 05:24	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	55.5		mg/l	5.00	0.839	10	-	07/22/21 00:45	44,300.0	JT
Fluoride	0.046	J	mg/l	0.050	0.037	1	-	07/22/21 08:40	44,300.0	SH
Sulfate	39.7		mg/l	1.00	0.454	1	-	07/21/21 18:19	44,300.0	JT

Project Name: NUCLEAR METALS **Lab Number:** L2138148
Project Number: 131884-004 **Report Date:** 07/23/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1524474-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	07/16/21 05:40	44,353.2	EL
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1524475-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	07/16/21 05:58	44,353.2	EL
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1524631-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/16/21 11:40	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1524634-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/16/21 11:40	121,2320B	JB
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG1525797-1										
Chloride	0.341	J	mg/l	0.500	0.083	1	-	07/21/21 17:43	44,300.0	JT
Sulfate	0.672	J	mg/l	1.00	0.454	1	-	07/21/21 17:43	44,300.0	JT
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526564-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	07/22/21 05:24	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG1526721-1										
Fluoride	ND		mg/l	0.050	0.037	1	-	07/22/21 07:02	44,300.0	SH

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138148
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1524474-2								
Nitrogen, Nitrite	96		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1524475-2								
Nitrogen, Nitrate	98		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 Batch: WG1525797-2								
Chloride	99		-		90-110	-		
Sulfate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1526564-2								
Dissolved Organic Carbon	98		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 Batch: WG1526721-2								
Fluoride	102		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138148
Report Date: 07/23/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1525797-3 QC Sample: L2138148-01 Client ID: HA20-CMT-4D3-07152021												
Chloride	45.8	8	53.3	94		-	-		90-110	-		18
Sulfate	83.6	16	98.8	95		-	-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526564-4 QC Sample: L2138148-01 Client ID: HA20-CMT-4D3-07152021												
Dissolved Organic Carbon	3.7	16	20	102		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526721-3 QC Sample: L2138148-01 Client ID: HA20-CMT-4D3-07152021												
Fluoride	0.149	0.8	0.968	102		-	-		90-110	-		15

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138148
Report Date: 07/23/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1525797-4 QC Sample: L2138148-01 Client ID: HA20-CMT-4D3-07152021						
Chloride	45.8	45.6	mg/l	0		18
Sulfate	83.6	83.7	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526564-3 QC Sample: L2138148-01 Client ID: HA20-CMT-4D3-07152021						
Dissolved Organic Carbon	3.7	3.6	mg/l	3		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526721-4 QC Sample: L2138148-01 Client ID: HA20-CMT-4D3-07152021						
Fluoride	0.149	0.150	mg/l	1		15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2138148-01A	Vial H2SO4 preserved	A	NA		5.3	Y	Absent		DOC-9060(28)
L2138148-01B	Vial H2SO4 preserved	A	NA		5.3	Y	Absent		DOC-9060(28)
L2138148-01C	Vial H2SO4 preserved	A	NA		5.3	Y	Absent		DOC-9060(28)
L2138148-01D	Plastic 120ml unpreserved/No Headspace	A	NA		5.3	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138148-01E	Plastic 250ml unpreserved	A	6	6	5.3	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2138148-01F	Amber 250ml unpreserved	A	6	6	5.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138148-01G	Amber 250ml unpreserved	A	6	6	5.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138148-02A	Vial H2SO4 preserved	A	NA		5.3	Y	Absent		DOC-9060(28)
L2138148-02B	Vial H2SO4 preserved	A	NA		5.3	Y	Absent		DOC-9060(28)
L2138148-02C	Vial H2SO4 preserved	A	NA		5.3	Y	Absent		DOC-9060(28)
L2138148-02D	Plastic 120ml unpreserved/No Headspace	A	NA		5.3	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138148-02E	Plastic 250ml unpreserved	A	6	6	5.3	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2138148-02F	Amber 250ml unpreserved	A	6	6	5.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138148-02G	Amber 250ml unpreserved	A	6	6	5.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138148-03A	Vial H2SO4 preserved	A	NA		5.3	Y	Absent		DOC-9060(28)
L2138148-03B	Vial H2SO4 preserved	A	NA		5.3	Y	Absent		DOC-9060(28)
L2138148-03C	Vial H2SO4 preserved	A	NA		5.3	Y	Absent		DOC-9060(28)
L2138148-03D	Plastic 120ml unpreserved/No Headspace	A	NA		5.3	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138148-03E	Plastic 250ml unpreserved	A	6	6	5.3	Y	Absent		SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2138148-03F	Amber 250ml unpreserved	A	6	6	5.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138148-03G	Amber 250ml unpreserved	A	6	6	5.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL — World Class Chemistry

Date Rec'd in Lab: 7/15/21

ALPHA Job #: L2138148

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: ~~3252H~~ 131884-004

Project Manager: ~~Nathan Hunt~~ K Alepidis

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com MKelley@HaleyAldrich.com KAlepidis@HaleyAldrich.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client Info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (SO4;Cl-;F-) (300)	Alkalinity (Carb/Bicarb) (SM 2320)				Sample Specific Comments	TOTAL # BOTTLES
38148-01	HAZO-CMT-4D3-07152021	7/15/21	1100	AQ	SRP	☐	☒	☐	☒	☐	☐	☒	☒	☒	☐	☐	☐		7
02	HAZO-CMT-5D1-07152021	↓	1220	↓	↓	☐	☒	☐	☒	☐	☐	☒	☒	☒	☐	☐	☐		7
03	HAZO-CMT-5D3-07152021	↓	1410	↓	↓	☐	☒	☐	☒	☐	☐	☒	☒	☒	☐	☐	☐		7
Container Type						V	A	A	P	P	P	V	P	P	P	-	-		
Preservative						B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
A. Prud	7/15/21 1515	[signature]	7/15/21 15:15
[signature]	7/15/21 1615	[signature] Plum AAL	7/15/21 1615
[signature]	7/15/21 1717	[signature]	7-15-21 1717

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

ANALYTICAL REPORT

Lab Number:	L2138330
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	131884-004
Report Date:	07/23/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2138330-01	HA20-CMT-6D3-07162021	WATER	CONCORD, MA	07/16/21 09:00	07/16/21
L2138330-02	HA20-CMT-1D1-07162021	WATER	CONCORD, MA	07/16/21 11:00	07/16/21
L2138330-03	HA20-CMT-1D2-07162021	WATER	CONCORD, MA	07/16/21 13:20	07/16/21

Project Name: NUCLEAR METALS **Lab Number:** L2138330
Project Number: 131884-004 **Report Date:** 07/23/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Volatile Organics

In reference to question H:

The WG1525628-3/-4 LCS/LCSD recoveries, associated with L2138330-02, are below the individual acceptance criteria for acetone (LCSD 67%), 2-butanone (LCSD 69%), and 2-hexanone (64%/64%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

L2138330-02: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0021)

Average Response Factor: 1,4-dioxane

L2138330-02: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

Semivolatile Organics

In reference to question H:

The WG1526203-2 LCS recovery, associated with L2138330-02, is below the acceptance criteria for aniline (32%); however, it has been identified as a "difficult" analyte and are within the 15-140% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

The surrogate recovery for the WG1526203-3 LCS, associated with L2138330-02, is outside the acceptance criteria for 2,4,6-tribromophenol (128%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.

Case Narrative (continued)

The WG1526203-2/-3 LCS/LCSD RPD(s), associated with L2138330-02, are above the acceptance criteria for acenaphthene (55%), 1,2,4-trichlorobenzene (39%), hexachlorobenzene (59%), bis(2-chloroethyl)ether (39%), 2-chloronaphthalene (45%), 1,2-dichlorobenzene (41%), 1,3-dichlorobenzene (39%), 1,4-dichlorobenzene (41%), 3,3'-dichlorobenzidine (50%), 2,4-dinitrotoluene (58%), 2,6-dinitrotoluene (48%), azobenzene (56%), fluoranthene (55%), 4-bromophenyl phenyl ether (56%), bis(2-chloroisopropyl)ether (38%), bis(2-chloroethoxy)methane (40%), hexachlorobutadiene (41%), hexachloroethane (43%), isophorone (41%), naphthalene (42%), nitrobenzene (41%), bis(2-ethylhexyl)phthalate (53%), butyl benzyl phthalate (53%), di-n-butylphthalate (54%), di-n-octylphthalate (52%), diethyl phthalate (55%), dimethyl phthalate (47%), benzo(a)anthracene (55%), benzo(a)pyrene (52%), benzo(b)fluoranthene (57%), benzo(k)fluoranthene (51%), chrysene (54%), acenaphthylene (46%), anthracene (56%), benzo(ghi)perylene (54%), fluorene (58%), phenanthrene (57%), dibenzo(a,h)anthracene (52%), indeno(1,2,3-cd)pyrene (55%), pyrene (56%), aniline (27%), 4-chloroaniline (33%), dibenzofuran (56%), 2-methylnaphthalene (45%), acetophenone (41%), 2,4,6-trichlorophenol (48%), 2-chlorophenol (38%), 2,4-dichlorophenol (43%), 2,4-dimethylphenol (43%), 2-nitrophenol (37%), 4-nitrophenol (53%), 2,4-dinitrophenol (39%), pentachlorophenol (56%), phenol (35%), 2-methylphenol (39%), 3-methylphenol/4-methylphenol (40%) and 2,4,5-trichlorophenol (48%).

Non-MCP Related Narratives

Dissolved Organic Carbon

L2138330-01: The sample has an elevated detection limit due to the dilution required by the sample matrix.

The samples were field filtered; a filter blank was not received.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Jennifer L Clements

Title: Technical Director/Representative Date: 07/23/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138330
Report Date: 07/23/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	Batch QC	WG1525628-3	2-Hexanone	LCS	64	70-130	02	potential low bias
8260C	Batch QC	WG1525628-4	Acetone	LCSD	67	70-130	02	potential low bias
8260C	Batch QC	WG1525628-4	Methyl ethyl ketone	LCSD	69	70-130	02	potential low bias
8260C	Batch QC	WG1525628-4	2-Hexanone	LCSD	64	70-130	02	potential low bias
MCP Semivolatile Organics - Westborough Lab								
8270D	Batch QC	WG1526203-2	Aniline	LCS	32	40-140	02	potential low bias
8270D	Batch QC	WG1526203-3	Acenaphthene	LCSD	55	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	1,2,4-Trichlorobenzene	LCSD	39	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Hexachlorobenzene	LCSD	59	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Bis(2-chloroethyl)ether	LCSD	39	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2-Chloronaphthalene	LCSD	45	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	1,2-Dichlorobenzene	LCSD	41	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	1,3-Dichlorobenzene	LCSD	39	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	1,4-Dichlorobenzene	LCSD	41	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	3,3'-Dichlorobenzidine	LCSD	50	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2,4-Dinitrotoluene	LCSD	58	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2,6-Dinitrotoluene	LCSD	48	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Azobenzene	LCSD	56	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Fluoranthene	LCSD	55	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	4-Bromophenyl phenyl ether	LCSD	56	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Bis(2-chloroisopropyl)ether	LCSD	38	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Bis(2-chloroethoxy)methane	LCSD	40	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Hexachlorobutadiene	LCSD	41	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Hexachloroethane	LCSD	43	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Isophorone	LCSD	41	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Naphthalene	LCSD	42	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Nitrobenzene	LCSD	41	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Bis(2-ethylhexyl)phthalate	LCSD	53	20	02	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138330
Report Date: 07/23/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC	WG1526203-3	Butyl benzyl phthalate	LCSD	53	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Di-n-butylphthalate	LCSD	54	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Di-n-octylphthalate	LCSD	52	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Diethyl phthalate	LCSD	55	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Dimethyl phthalate	LCSD	47	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Benzo(a)anthracene	LCSD	55	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Benzo(a)pyrene	LCSD	52	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Benzo(b)fluoranthene	LCSD	57	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Benzo(k)fluoranthene	LCSD	51	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Chrysene	LCSD	54	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Acenaphthylene	LCSD	46	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Anthracene	LCSD	56	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Benzo(ghi)perylene	LCSD	54	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Fluorene	LCSD	58	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Phenanthrene	LCSD	57	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Dibenzo(a,h)anthracene	LCSD	52	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Indeno(1,2,3-cd)pyrene	LCSD	55	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Pyrene	LCSD	56	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Aniline	LCSD	27	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	4-Chloroaniline	LCSD	33	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Dibenzofuran	LCSD	56	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2-Methylnaphthalene	LCSD	45	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Acetophenone	LCSD	41	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2,4,6-Trichlorophenol	LCSD	48	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2-Chlorophenol	LCSD	38	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2,4-Dichlorophenol	LCSD	43	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2,4-Dimethylphenol	LCSD	43	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2-Nitrophenol	LCSD	37	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	4-Nitrophenol	LCSD	53	20	02	non-directional bias

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138330
Report Date: 07/23/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
8270D	Batch QC	WG1526203-3	2,4-Dinitrophenol	LCSD	39	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Pentachlorophenol	LCSD	56	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	Phenol	LCSD	35	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2-Methylphenol	LCSD	39	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	3-Methylphenol/4-Methylphenol	LCSD	40	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2,4,5-Trichlorophenol	LCSD	48	20	02	non-directional bias
8270D	Batch QC	WG1526203-3	2,4,6-Tribromophenol	Surrogate	128	15-110	-	potential high bias

ORGANICS

VOLATILES

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138330
Project Number:	131884-004	**Report Date:**	07/23/21

SAMPLE RESULTS

Lab ID:	L2138330-02	Date Collected:	07/16/21 11:00
Client ID:	HA20-CMT-1D1-07162021	Date Received:	07/16/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 07/19/21 23:03
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.60	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	0.18	J	ug/l	0.50	0.16	1
Toluene	0.62	J	ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.20	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2138330

Project Number: 131884-004 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID:	L2138330-02	Date Collected:	07/16/21 11:00
Client ID:	HA20-CMT-1D1-07162021	Date Received:	07/16/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	3.0	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2138330

Project Number: 131884-004 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID:	L2138330-02	Date Collected:	07/16/21 11:00
Client ID:	HA20-CMT-1D1-07162021	Date Received:	07/16/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	122		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2138330
Project Number: 131884-004 **Report Date:** 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/19/21 16:56
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG1525628-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS
Lab Number: L2138330
Project Number: 131884-004
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/19/21 16:56
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG1525628-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2138330
Project Number: 131884-004 **Report Date:** 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/19/21 16:56
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG1525628-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	118		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138330
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1525628-3 WG1525628-4								
Methylene chloride	94		97		70-130	3		20
1,1-Dichloroethane	100		98		70-130	2		20
Chloroform	100		96		70-130	4		20
Carbon tetrachloride	92		92		70-130	0		20
1,2-Dichloropropane	100		99		70-130	1		20
Dibromochloromethane	84		81		70-130	4		20
1,1,2-Trichloroethane	87		85		70-130	2		20
Tetrachloroethene	89		85		70-130	5		20
Chlorobenzene	94		92		70-130	2		20
Trichlorofluoromethane	100		100		70-130	0		20
1,2-Dichloroethane	95		95		70-130	0		20
1,1,1-Trichloroethane	97		94		70-130	3		20
Bromodichloromethane	96		95		70-130	1		20
trans-1,3-Dichloropropene	86		82		70-130	5		20
cis-1,3-Dichloropropene	88		91		70-130	3		20
1,1-Dichloropropene	97		94		70-130	3		20
Bromoform	70		71		70-130	1		20
1,1,2,2-Tetrachloroethane	93		91		70-130	2		20
Benzene	96		94		70-130	2		20
Toluene	93		93		70-130	0		20
Ethylbenzene	93		90		70-130	3		20
Chloromethane	97		93		70-130	4		20
Bromomethane	120		120		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138330
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1525628-3 WG1525628-4								
Vinyl chloride	120		120		70-130	0		20
Chloroethane	110		110		70-130	0		20
1,1-Dichloroethene	100		96		70-130	4		20
trans-1,2-Dichloroethene	110		100		70-130	10		20
Trichloroethene	93		93		70-130	0		20
1,2-Dichlorobenzene	90		88		70-130	2		20
1,3-Dichlorobenzene	93		90		70-130	3		20
1,4-Dichlorobenzene	93		87		70-130	7		20
Methyl tert butyl ether	94		91		70-130	3		20
p/m-Xylene	95		90		70-130	5		20
o-Xylene	90		90		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	99		94		70-130	5		20
1,2,3-Trichloropropane	87		84		70-130	4		20
Styrene	95		90		70-130	5		20
Dichlorodifluoromethane	120		120		70-130	0		20
Acetone	70		**67**	Q	70-130	4		20
Carbon disulfide	110		100		70-130	10		20
Methyl ethyl ketone	72		**69**	Q	70-130	4		20
Methyl isobutyl ketone	73		72		70-130	1		20
2-Hexanone	**64**	Q	**64**	Q	70-130	0		20
Bromochloromethane	96		100		70-130	4		20
Tetrahydrofuran	77		71		70-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Lab Number: L2138330
Project Number: 131884-004
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1525628-3 WG1525628-4								
2,2-Dichloropropane	100		100		70-130	0		20
1,2-Dibromoethane	85		86		70-130	1		20
1,3-Dichloropropane	85		84		70-130	1		20
1,1,1,2-Tetrachloroethane	88		89		70-130	1		20
Bromobenzene	86		84		70-130	2		20
n-Butylbenzene	97		92		70-130	5		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	98		92		70-130	6		20
o-Chlorotoluene	98		93		70-130	5		20
p-Chlorotoluene	97		91		70-130	6		20
1,2-Dibromo-3-chloropropane	76		76		70-130	0		20
Hexachlorobutadiene	82		80		70-130	2		20
Isopropylbenzene	100		94		70-130	6		20
p-Isopropyltoluene	99		92		70-130	7		20
Naphthalene	85		83		70-130	2		20
n-Propylbenzene	100		93		70-130	7		20
1,2,3-Trichlorobenzene	84		84		70-130	0		20
1,2,4-Trichlorobenzene	85		84		70-130	1		20
1,3,5-Trimethylbenzene	94		88		70-130	7		20
1,2,4-Trimethylbenzene	95		91		70-130	4		20
Diethyl ether	93		96		70-130	3		20
Diisopropyl Ether	81		81		70-130	0		20
Ethyl-Tert-Butyl-Ether	84		85		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1525628-3 WG1525628-4								
Tertiary-Amyl Methyl Ether	84		87		70-130	4		20
1,4-Dioxane	90		92		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		97		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	100		95		70-130
Dibromofluoromethane	103		107		70-130

SEMIVOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2138330
Project Number: 131884-004 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID:	L2138330-01	Date Collected:	07/16/21 09:00
Client ID:	HA20-CMT-6D3-07162021	Date Received:	07/16/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	07/22/21 13:27
Analytical Date:	07/22/21 23:52		
Analyst:	DB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.234		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2138330

Project Number: 131884-004 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138330-02
Client ID: HA20-CMT-1D1-07162021
Sample Location: CONCORD, MA

Date Collected: 07/16/21 11:00
Date Received: 07/16/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 07/22/21 11:19
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/21/21 08:04

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.28	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.97	1
Hexachloroethane	ND		ug/l	2.0	0.78	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138330
Project Number:	131884-004	**Report Date:**	07/23/21

SAMPLE RESULTS

Lab ID:	L2138330-02	Date Collected:	07/16/21 11:00
Client ID:	HA20-CMT-1D1-07162021	Date Received:	07/16/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Pentachlorophenol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138330
Project Number:	131884-004	**Report Date:**	07/23/21

SAMPLE RESULTS

Lab ID:	L2138330-02	Date Collected:	07/16/21 11:00
Client ID:	HA20-CMT-1D1-07162021	Date Received:	07/16/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		15-110
Phenol-d6	65		15-110
Nitrobenzene-d5	103		30-130
2-Fluorobiphenyl	81		30-130
2,4,6-Tribromophenol	90		15-110
4-Terphenyl-d14	74		30-130

Project Name: NUCLEAR METALS

Lab Number: L2138330

Project Number: 131884-004

Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138330-02
Client ID: HA20-CMT-1D1-07162021
Sample Location: CONCORD, MA

Date Collected: 07/16/21 11:00
Date Received: 07/16/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/23/21 00:16
Analyst: DB

Extraction Method: EPA 3510C
Extraction Date: 07/22/21 13:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.198		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	49		15-110

Project Name: NUCLEAR METALS
Lab Number: L2138330
Project Number: 131884-004
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138330-03
Client ID: HA20-CMT-1D2-07162021
Sample Location: CONCORD, MA

Date Collected: 07/16/21 13:20
Date Received: 07/16/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/23/21 00:40
Analyst: DB

Extraction Method: EPA 3510C
Extraction Date: 07/22/21 13:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.105	J	ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 07/22/21 10:02
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/21/21 08:04

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 02 Batch: WG1526203-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138330
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 07/22/21 10:02
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/21/21 08:04

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 02 Batch: WG1526203-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 07/22/21 10:02
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/21/21 08:04

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 02 Batch: WG1526203-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	79		15-110
4-Terphenyl-d14	80		30-130

Project Name: NUCLEAR METALS **Lab Number:** L2138330
Project Number: 131884-004 **Report Date:** 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 07/22/21 21:26
Analyst: DB

Extraction Method: EPA 3510C
Extraction Date: 07/22/21 13:27

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1526767-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	52		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1526203-2 WG1526203-3								
Acenaphthene	53		93		40-140	**55**	Q	20
1,2,4-Trichlorobenzene	53		79		40-140	**39**	Q	20
Hexachlorobenzene	58		107		40-140	**59**	Q	20
Bis(2-chloroethyl)ether	46		68		40-140	**39**	Q	20
2-Chloronaphthalene	54		85		40-140	**45**	Q	20
1,2-Dichlorobenzene	48		73		40-140	**41**	Q	20
1,3-Dichlorobenzene	48		71		40-140	**39**	Q	20
1,4-Dichlorobenzene	49		74		40-140	**41**	Q	20
3,3'-Dichlorobenzidine	52		87		40-140	**50**	Q	20
2,4-Dinitrotoluene	65		118		40-140	**58**	Q	20
2,6-Dinitrotoluene	61		100		40-140	**48**	Q	20
Azobenzene	54		96		40-140	**56**	Q	20
Fluoranthene	57		100		40-140	**55**	Q	20
4-Bromophenyl phenyl ether	60		107		40-140	**56**	Q	20
Bis(2-chloroisopropyl)ether	47		69		40-140	**38**	Q	20
Bis(2-chloroethoxy)methane	50		75		40-140	**40**	Q	20
Hexachlorobutadiene	55		83		40-140	**41**	Q	20
Hexachloroethane	49		76		40-140	**43**	Q	20
Isophorone	48		73		40-140	**41**	Q	20
Naphthalene	49		75		40-140	**42**	Q	20
Nitrobenzene	54		82		40-140	**41**	Q	20
Bis(2-ethylhexyl)phthalate	60		103		40-140	**53**	Q	20
Butyl benzyl phthalate	59		102		40-140	**53**	Q	20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1526203-2 WG1526203-3								
Di-n-butylphthalate	54		94		40-140	**54**	Q	20
Di-n-octylphthalate	57		97		40-140	**52**	Q	20
Diethyl phthalate	58		102		40-140	**55**	Q	20
Dimethyl phthalate	57		92		40-140	**47**	Q	20
Benzo(a)anthracene	58		102		40-140	**55**	Q	20
Benzo(a)pyrene	64		109		40-140	**52**	Q	20
Benzo(b)fluoranthene	62		111		40-140	**57**	Q	20
Benzo(k)fluoranthene	64		108		40-140	**51**	Q	20
Chrysene	61		106		40-140	**54**	Q	20
Acenaphthylene	52		83		40-140	**46**	Q	20
Anthracene	56		100		40-140	**56**	Q	20
Benzo(ghi)perylene	64		111		40-140	**54**	Q	20
Fluorene	54		98		40-140	**58**	Q	20
Phenanthrene	55		99		40-140	**57**	Q	20
Dibenzo(a,h)anthracene	62		106		40-140	**52**	Q	20
Indeno(1,2,3-cd)pyrene	60		106		40-140	**55**	Q	20
Pyrene	55		98		40-140	**56**	Q	20
Aniline	**32**	Q	42		40-140	**27**	Q	20
4-Chloroaniline	43		60		40-140	**33**	Q	20
Dibenzofuran	54		96		40-140	**56**	Q	20
2-Methylnaphthalene	50		79		40-140	**45**	Q	20
Acetophenone	46		70		40-140	**41**	Q	20
2,4,6-Trichlorophenol	62		101		30-130	**48**	Q	20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138330
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1526203-2 WG1526203-3								
2-Chlorophenol	52		76		30-130	**38**	Q	20
2,4-Dichlorophenol	57		88		30-130	**43**	Q	20
2,4-Dimethylphenol	47		73		30-130	**43**	Q	20
2-Nitrophenol	62		90		30-130	**37**	Q	20
4-Nitrophenol	60		103		30-130	**53**	Q	20
2,4-Dinitrophenol	86		128		30-130	**39**	Q	20
Pentachlorophenol	54		96		30-130	**56**	Q	20
Phenol	38		54		30-130	**35**	Q	20
2-Methylphenol	48		71		30-130	**39**	Q	20
3-Methylphenol/4-Methylphenol	52		78		30-130	**40**	Q	20
2,4,5-Trichlorophenol	62		101		30-130	**48**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	50		70		15-110
Phenol-d6	40		58		15-110
Nitrobenzene-d5	63		91		30-130
2-Fluorobiphenyl	59		93		30-130
2,4,6-Tribromophenol	73		**128**	Q	15-110
4-Terphenyl-d14	64		112		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS

Project Number: 131884-004

Lab Number: L2138330

Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1526767-2 WG1526767-3								
1,4-Dioxane	112		111		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	50		53		15-110

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS **Lab Number:** L2138330
Project Number: 131884-004 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138330-01 Date Collected: 07/16/21 09:00
Client ID: HA20-CMT-6D3-07162021 Date Received: 07/16/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Alkalinity, Bicarbonate	81.7		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Nitrogen, Nitrite	0.026	J	mg/l	0.050	0.014	1	-	07/17/21 04:39	44,353.2	EL
Nitrogen, Nitrate	0.20		mg/l	0.10	0.023	1	-	07/17/21 04:39	44,353.2	EL
Dissolved Organic Carbon	10.	J	mg/l	20	0.86	20	-	07/22/21 05:24	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	67.2		mg/l	5.00	0.839	10	-	07/21/21 19:43	44,300.0	JT
Fluoride	0.076		mg/l	0.050	0.037	1	-	07/22/21 08:51	44,300.0	SH
Sulfate	140.		mg/l	10.0	4.54	10	-	07/21/21 19:43	44,300.0	JT

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138330-02
Client ID: HA20-CMT-1D1-07162021
Sample Location: CONCORD, MA

Date Collected: 07/16/21 11:00
Date Received: 07/16/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Alkalinity, Bicarbonate	151.		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	07/17/21 04:40	44,353.2	EL
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	07/17/21 04:40	44,353.2	EL
Phosphorus, Total	0.124		mg/l	0.010	0.004	1	07/19/21 11:25	07/20/21 11:46	121,4500P-E	SD
Phosphorus, Orthophosphate	0.052		mg/l	0.005	0.001	1	-	07/17/21 08:05	121,4500P-E	KA
Dissolved Organic Carbon	21.		mg/l	10	0.43	10	-	07/22/21 05:24	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	90.1		mg/l	5.00	0.839	10	-	07/21/21 20:08	44,300.0	JT
Fluoride	0.613		mg/l	0.050	0.037	1	-	07/22/21 09:02	44,300.0	SH
Sulfate	232.		mg/l	10.0	4.54	10	-	07/21/21 20:08	44,300.0	JT

Project Name: NUCLEAR METALS | **Lab Number:** L2138330
Project Number: 131884-004 | **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138330-03
Client ID: HA20-CMT-1D2-07162021
Sample Location: CONCORD, MA

Date Collected: 07/16/21 13:20
Date Received: 07/16/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Alkalinity, Bicarbonate	73.4		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Nitrogen, Nitrite	0.087		mg/l	0.050	0.014	1	-	07/17/21 04:45	44,353.2	EL
Nitrogen, Nitrate	1.0		mg/l	0.10	0.023	1	-	07/17/21 04:45	44,353.2	EL
Dissolved Organic Carbon	0.70	J	mg/l	1.0	0.04	1	-	07/22/21 05:24	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	96.4		mg/l	5.00	0.839	10	-	07/21/21 20:32	44,300.0	JT
Fluoride	0.054		mg/l	0.050	0.037	1	-	07/22/21 09:13	44,300.0	SH
Sulfate	37.8		mg/l	10.0	4.54	10	-	07/21/21 20:32	44,300.0	JT

Project Name: NUCLEAR METALS **Lab Number:** L2138330
Project Number: 131884-004 **Report Date:** 07/23/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1524883-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	07/17/21 04:14	44,353.2	EL
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1524884-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	07/17/21 04:12	44,353.2	EL
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1524937-1										
Phosphorus, Orthophosphate	ND		mg/l	0.005	0.001	1	-	07/17/21 08:01	121,4500P-E	KA
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1525335-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	07/19/21 11:25	07/20/21 11:17	121,4500P-E	SD
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG1525797-1										
Chloride	0.341	J	mg/l	0.500	0.083	1	-	07/21/21 17:43	44,300.0	JT
Sulfate	0.672	J	mg/l	1.00	0.454	1	-	07/21/21 17:43	44,300.0	JT
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526564-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	07/22/21 05:24	1,9060A	DW
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526680-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526682-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG1526721-1										
Fluoride	ND		mg/l	0.050	0.037	1	-	07/22/21 07:02	44,300.0	SH

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1524883-2								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1524884-2								
Nitrogen, Nitrate	102		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1524937-2								
Phosphorus, Orthophosphate	105		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1525335-2								
Phosphorus, Total	109		-		80-120	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 Batch: WG1525797-2								
Chloride	99		-		90-110	-		
Sulfate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1526564-2								
Dissolved Organic Carbon	98		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 Batch: WG1526721-2								
Fluoride	102		-		90-110	-		

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2138330
Report Date: 07/23/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526680-2 QC Sample: L2138330-01 Client ID: HA20-CMT-6D3-07162021						
Alkalinity, Bicarbonate	81.7	85.2	mg CaCO3/L	4		9
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526682-2 QC Sample: L2138330-01 Client ID: HA20-CMT-6D3-07162021						
Alkalinity, Carbonate	ND	ND	mg CaCO3/L	NC		10

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2138330-01D	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)
L2138330-01E	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)
L2138330-01F	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)
L2138330-01G	Plastic 120ml unpreserved/No Headspace	A	NA		5.6	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138330-01H	Plastic 250ml unpreserved	A	7	7	5.6	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2138330-01K	Amber 250ml unpreserved	A	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138330-01L	Amber 250ml unpreserved	A	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138330-02A	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2138330-02B	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2138330-02C	Vial HCl preserved	A	NA		5.6	Y	Absent		MCP-8260-10(14)
L2138330-02D	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)
L2138330-02E	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)
L2138330-02F	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)
L2138330-02G	Plastic 120ml unpreserved/No Headspace	A	NA		5.6	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138330-02H	Plastic 250ml unpreserved	A	7	7	5.6	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2138330-02I	Plastic 250ml unpreserved	A	7	7	5.6	Y	Absent		OPHOS-4500(2)
L2138330-02J	Plastic 250ml H2SO4 preserved	A	<2	<2	5.6	Y	Absent		TPHOS-4500(28)
L2138330-02K	Amber 250ml unpreserved	A	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138330-02L	Amber 250ml unpreserved	A	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138330-02M	Amber 250ml unpreserved	A	7	7	5.6	Y	Absent		MCP-8270-10-LVI(7)
L2138330-02N	Amber 250ml unpreserved	A	7	7	5.6	Y	Absent		MCP-8270-10-LVI(7)
L2138330-03D	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138330
Report Date: 07/23/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2138330-03E	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)
L2138330-03F	Vial H2SO4 preserved	A	NA		5.6	Y	Absent		DOC-9060(28)
L2138330-03G	Plastic 120ml unpreserved/No Headspace	A	NA		5.6	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138330-03H	Plastic 250ml unpreserved	A	7	7	5.6	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2138330-03K	Amber 250ml unpreserved	A	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138330-03L	Amber 250ml unpreserved	A	7	7	5.6	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS **Lab Number:** L2138330
Project Number: 131884-004 **Report Date:** 07/23/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:07232119:32

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193

Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 7/16/21

ALPHA Job #: L2138330

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: ~~3252H~~ 131584-004

Project Manager: ~~Nathan Hunt~~ K Alepidis

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com MKelly KAlepidis@HaleyAldrich.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING: Filtration ☒ Done ☐ Not Needed ☐ Lab to do; Preservation ☐ Lab to do (Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (SO4;Cl-;F-) (300)	Alkalinity (Carb/Bicarb) (SM 2320)				Sample Specific Comments	TOTAL # BOTTLES
38330-01	HAZO-CMT-6D3-07162021	7/16/21	900	AQ	SBP	☐	☒	☐	☒	☐	☐	☒	☒	☒	☐	☐	☐		7
-02	HAZO-CMT-1D1-07162021	↓	1100	↓	↓	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-03	HAZO-CMT-1D2-07162021	↓	1320	↓	↓	☐	☒	☐	☒	☐	☐	☒	☒	☒	☐	☐	☐		7

	VOC's	1,4-Dioxane	SVOC's	Nitrate/Nitrite	Total Phosphorous	Ortho-phosphate	DOC	Total Anions	Alkalinity			
Container Type	V	A	A	P	P	P	V	P	P	P	-	-
Preservative	B	A	A	A	D	A	D	A	A	O	-	-

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	7/16/21 14:05	Orlando DAVIS AAL	7-16-21 14:05
Orlando DAVIS AAL	7-16-21 15:50	[signature]	7/16/21 1550

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 5-JAN-12)

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2138330**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 131884-004**
Lab Sample ID	**: WG1525628-5**	**Lab File ID**	**: VJ210719N08**
Instrument ID	**: JACK**		
Matrix	**: WATER**	**Analysis Date**	**: 07/19/21 16:56**

Client Sample No.	Lab Sample ID	Analysis Date
WG1525628-3LCS	WG1525628-3	07/19/21 15:35
WG1525628-4LCSD	WG1525628-4	07/19/21 16:16
HA20-CMT-1D1-07162021	L2138330-02	07/19/21 23:03

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2138330		
Project Name	: NUCLEAR METALS	Project Number	: 131884-004		
Instrument ID	: JACK	Calibration Date	: 07/19/21 15:35		
Lab File ID	: VJ210719N04	Init. Calib. Date(s)	: 07/01/21	07/01/21	
Sample No	: WG1525628-2	Init. Calib. Times	: 11:27	16:14	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	65	0
Dichlorodifluoromethane	0.312	0.38	-	-21.8*	20	77	0
Chloromethane	0.616	0.598	-	2.9	20	64	-.02
Vinyl chloride	10	11.835	-	-18.4	20	76	0
Bromomethane	10	11.945	-	-19.5	20	70	0
Chloroethane	0.244	0.273	-	-11.9	20	72	0
Trichlorofluoromethane	0.575	0.608	-	-5.7	20	69	0
Ethyl ether	0.187	0.174	-	7	20	63	0
1,1-Dichloroethene	0.377	0.381	-	-1.1	20	67	0
Carbon disulfide	0.946	1.013	-	-7.1	20	70	0
Freon-113	0.373	0.417	-	-11.8	20	73	0
Iodomethane	10	10.989	-	-9.9	20	108	0
Acrolein	10	10.286	-	-2.9	20	69	0
Methylene chloride	0.401	0.375	-	6.5	20	65	0
Acetone	0.115	0.081*	-	29.6*	20	48	0
trans-1,2-Dichloroethene	0.388	0.412	-	-6.2	20	71	0
Methyl acetate	0.315	0.231	-	26.7*	20	51	0
Methyl tert-butyl ether	0.882	0.827	-	6.2	20	63	0
tert-Butyl alcohol	0.032	0.021*	-	34.4*	20	47	0
Diisopropyl ether	1.883	1.531	-	18.7	20	56	0
1,1-Dichloroethane	0.827	0.825	-	0.2	20	66	0
Halothane	0.324	0.334	-	-3.1	20	69	0
Acrylonitrile	0.146	0.127	-	13	20	60	0
Ethyl tert-butyl ether	1.387	1.163	-	16.1	20	58	0
Vinyl acetate	1.178	0.908	-	22.9*	20	49	0
cis-1,2-Dichloroethene	0.449	0.462	-	-2.9	20	68	0
2,2-Dichloropropane	0.608	0.615	-	-1.2	20	67	0
Bromochloromethane	0.203	0.195	-	3.9	20	62	0
Cyclohexane	0.971	0.93	-	4.2	20	64	0
Chloroform	0.722	0.741	-	-2.6	20	71	0
Ethyl acetate	0.396	0.296	-	25.3*	20	52	0
Carbon tetrachloride	0.603	0.553	-	8.3	20	63	0
Tetrahydrofuran	0.125	0.097	-	22.4*	20	54	-.01
Dibromofluoromethane	0.246	0.254	-	-3.3	20	66	0
1,1,1-Trichloroethane	0.647	0.625	-	3.4	20	64	0
2-Butanone	0.182	0.132	-	27.5*	20	52	0
1,1-Dichloropropene	0.509	0.495	-	2.8	20	65	0
Benzene	1.59	1.529	-	3.8	20	67	0
tert-Amyl methyl ether	0.963	0.806	-	16.3	20	58	0
1,2-Dichloroethane-d4	0.285	0.284	-	0.4	20	64	0
1,2-Dichloroethane	0.555	0.526	-	5.2	20	63	0
Methyl cyclohexane	0.707	0.723	-	-2.3	20	68	0
Trichloroethene	0.422	0.394	-	6.6	20	63	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2138330**	
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 131884-004**	
Instrument ID	**: JACK**	**Calibration Date**	**: 07/19/21 15:35**	
Lab File ID	**: VJ210719N04**	**Init. Calib. Date(s)**	**: 07/01/21**	**07/01/21**
Sample No	**: WG1525628-2**	**Init. Calib. Times**	**: 11:27**	**16:14**
Channel	**:**			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	0.22	0.217	-	1.4	20	67	0
1,2-Dichloropropane	0.452	0.453	-	-0.2	20	69	0
2-Chloroethyl vinyl ether	0.246	0.119	-	51.6*	20	33	0
Bromodichloromethane	0.543	0.519	-	4.4	20	65	0
1,4-Dioxane	0.00248	0.00223*	-	10.1	20	60	0
cis-1,3-Dichloropropene	0.638	0.565	-	11.4	20	60	0
Chlorobenzene-d5	1	1	-	0	20	67	0
Toluene-d8	1.189	1.198	-	-0.8	20	67	0
Toluene	1.323	1.236	-	6.6	20	67	0
4-Methyl-2-pentanone	0.174	0.128	-	26.4*	20	53	0
Tetrachloroethene	0.553	0.494	-	10.7	20	63	0
trans-1,3-Dichloropropene	0.696	0.599	-	13.9	20	62	0
Ethyl methacrylate	0.517	0.464	-	10.3	20	63	0
1,1,2-Trichloroethane	0.323	0.281	-	13	20	61	0
Chlorodibromomethane	0.491	0.41	-	16.5	20	61	0
1,3-Dichloropropane	0.646	0.552	-	14.6	20	62	0
1,2-Dibromoethane	0.4	0.34	-	15	20	63	0
2-Hexanone	0.373	0.238	-	36.2*	20	46	0
Chlorobenzene	1.513	1.42	-	6.1	20	67	0
Ethylbenzene	2.64	2.465	-	6.6	20	68	0
1,1,1,2-Tetrachloroethane	0.502	0.441	-	12.2	20	61	0
p/m Xylene	20	18.678	-	6.6	20	66	0
o Xylene	1.049	0.965	-	8	20	67	0
Styrene	1.721	1.634	-	5.1	20	68	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	67	0
Bromoform	0.553	0.39	-	29.5*	20	51	0
Isopropylbenzene	5.181	5.166	-	0.3	20	68	0
4-Bromofluorobenzene	0.922	0.922	-	0	20	65	0
Bromobenzene	1.164	1.006	-	13.6	20	61	0
n-Propylbenzene	6.009	6.033	-	-0.4	20	67	0
1,4-Dichlorobutane	1.732	1.602	-	7.5	20	64	0
1,1,2,2-Tetrachloroethane	0.817	0.762	-	6.7	20	64	0
4-Ethyltoluene	4.971	4.946	-	0.5	20	69	0
2-Chlorotoluene	3.947	3.875	-	1.8	20	68	0
1,3,5-Trimethylbenzene	4.323	4.055	-	6.2	20	65	0
1,2,3-Trichloropropane	0.686	0.599	-	12.7	20	61	0
trans-1,4-Dichloro-2-buten	0.294	0.254	-	13.6	20	63	0
4-Chlorotoluene	3.63	3.508	-	3.4	20	65	0
tert-Butylbenzene	3.753	3.66	-	2.5	20	67	0
1,2,4-Trimethylbenzene	4.263	4.044	-	5.1	20	66	0
sec-Butylbenzene	5.055	5.595	-	-10.7	20	75	0
p-Isopropyltoluene	4.672	4.642	-	0.6	20	69	0
1,3-Dichlorobenzene	2.337	2.173	-	7	20	65	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	**Lab Number**	: L2138330	
Project Name	: NUCLEAR METALS	**Project Number**	: 131884-004	
Instrument ID	: JACK	**Calibration Date**	: 07/19/21 15:35	
Lab File ID	: VJ210719N04	**Init. Calib. Date(s)**	: 07/01/21	07/01/21
Sample No	: WG1525628-2	**Init. Calib. Times**	: 11:27	16:14
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	2.307	2.146	-	7	20	65	0
p-Diethylbenzene	2.705	2.666	-	1.4	20	68	0
n-Butylbenzene	4.086	3.959	-	3.1	20	66	0
1,2-Dichlorobenzene	2.118	1.898	-	10.4	20	64	0
1,2,4,5-Tetramethylbenzene	4.075	3.973	-	2.5	20	69	0
1,2-Dibromo-3-chloropropan	0.146	0.112	-	23.3*	20	54	0
1,3,5-Trichlorobenzene	1.504	1.335	-	11.2	20	63	0
Hexachlorobutadiene	0.546	0.447	-	18.1	20	59	0
1,2,4-Trichlorobenzene	1.224	1.045	-	14.6	20	60	0
Naphthalene	3.063	2.594	-	15.3	20	59	0
1,2,3-Trichlorobenzene	1.075	0.906	-	15.7	20	61	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L2138589
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	131884-004
Report Date:	07/28/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138589
Report Date: 07/28/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2138589-01	HA20-CMT-2D2-07192021	WATER	CONCORD, MA	07/19/21 10:30	07/19/21
L2138589-02	HA20-CMT-2D3-07192021	WATER	CONCORD, MA	07/19/21 12:25	07/19/21
L2138589-03	HA20-CMT-3D3-07192021	WATER	CONCORD, MA	07/19/21 14:35	07/19/21

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138589
Project Number:	131884-004	**Report Date:**	07/28/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138589
Project Number:	131884-004	**Report Date:**	07/28/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138589
Project Number:	131884-004	**Report Date:**	07/28/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

Non-MCP Related Narratives

Nitrogen, Nitrate

The WG1525601-4 MS recovery, performed on L2138589-03, is outside the acceptance criteria for nitrogen, nitrate (25%); however, the associated LCS recovery is within criteria. No further action was taken.

Dissolved Organic Carbon

The samples were field filtered; a filter blank was not received.

Anions by Ion Chromatography

Fluoride L2138589-03: The sample has an elevated detection limit due to the dilution required by the sample matrix.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Caitlin Walukevich Caitlin Walukevich

Title: Technical Director/Representative Date: 07/28/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138589
Report Date: 07/28/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
General Chemistry - Westborough Lab								
353.2	Batch QC (L2138589-03)	WG1525601-4	Nitrogen, Nitrate	MS	25	83-113	01-03	potential low bias

ORGANICS

SEMIVOLATILES

Project Name: NUCLEAR METALS
Lab Number: L2138589
Project Number: 131884-004
Report Date: 07/28/21

SAMPLE RESULTS

Lab ID:	L2138589-01	Date Collected:	07/19/21 10:30
Client ID:	HA20-CMT-2D2-07192021	Date Received:	07/19/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	07/23/21 15:25
Analytical Date:	07/25/21 18:05		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.438		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	31		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138589
Project Number:	131884-004	**Report Date:**	07/28/21

SAMPLE RESULTS

Lab ID:	L2138589-02	Date Collected:	07/19/21 12:25
Client ID:	HA20-CMT-2D3-07192021	Date Received:	07/19/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	07/23/21 15:25
Analytical Date:	07/25/21 18:34		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.417		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	35		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138589
Project Number:	131884-004	**Report Date:**	07/28/21

SAMPLE RESULTS

Lab ID:	L2138589-03	Date Collected:	07/19/21 14:35
Client ID:	HA20-CMT-3D3-07192021	Date Received:	07/19/21
Sample Location:	CONCORD, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	07/23/21 15:25
Analytical Date:	07/25/21 19:03		
Analyst:	SMB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	13.2		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	34		15-110

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138589
Report Date: 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 07/25/21 11:07
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 07/23/21 15:25

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1527275-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	38		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138589
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1527275-2 WG1527275-3								
1,4-Dioxane	109		107		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	36		39		15-110

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138589
Report Date: 07/28/21

SAMPLE RESULTS

Lab ID: L2138589-01
Client ID: HA20-CMT-2D2-07192021
Sample Location: CONCORD, MA

Date Collected: 07/19/21 10:30
Date Received: 07/19/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Alkalinity, Bicarbonate	89.8		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	07/20/21 04:55	44,353.2	EL
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	07/20/21 04:55	44,353.2	EL
Dissolved Organic Carbon	1.3		mg/l	1.0	0.04	1	-	07/23/21 04:58	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	56.0		mg/l	5.00	0.839	10	-	07/24/21 20:14	44,300.0	SH
Fluoride	0.195		mg/l	0.050	0.037	1	-	07/24/21 18:58	44,300.0	SH
Sulfate	51.1		mg/l	10.0	4.54	10	-	07/24/21 20:14	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138589
Report Date: 07/28/21

SAMPLE RESULTS

Lab ID: L2138589-02
Client ID: HA20-CMT-2D3-07192021
Sample Location: CONCORD, MA

Date Collected: 07/19/21 12:25
Date Received: 07/19/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Alkalinity, Bicarbonate	100.		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	07/20/21 04:56	44,353.2	EL
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	07/20/21 04:56	44,353.2	EL
Dissolved Organic Carbon	6.7		mg/l	4.0	0.17	4	-	07/23/21 04:58	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	56.2		mg/l	5.00	0.839	10	-	07/24/21 17:41	44,300.0	SH
Fluoride	0.118		mg/l	0.050	0.037	1	-	07/24/21 19:31	44,300.0	SH
Sulfate	115.		mg/l	10.0	4.54	10	-	07/24/21 17:41	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2138589
Project Number: 131884-004 | **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID: L2138589-03
Client ID: HA20-CMT-3D3-07192021
Sample Location: CONCORD, MA

Date Collected: 07/19/21 14:35
Date Received: 07/19/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Alkalinity, Bicarbonate	246.		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Nitrogen, Nitrite	4.0		mg/l	0.50	0.14	10	-	07/20/21 06:25	44,353.2	EL
Nitrogen, Nitrate	42.		mg/l	1.0	0.23	10	-	07/20/21 06:25	44,353.2	EL
Dissolved Organic Carbon	82.		mg/l	40	1.7	40	-	07/23/21 04:58	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	139.		mg/l	12.5	2.10	25	-	07/24/21 19:41	44,300.0	SH
Fluoride	ND		mg/l	1.25	0.925	25	-	07/24/21 19:41	44,300.0	SH
Sulfate	1050		mg/l	25.0	11.4	25	-	07/24/21 19:41	44,300.0	SH

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1525600-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	07/20/21 04:41	44,353.2	EL
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1525601-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	07/20/21 04:38	44,353.2	EL
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526680-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526682-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1527009-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	07/23/21 04:58	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG1527601-1										
Fluoride	ND		mg/l	0.050	0.037	1	-	07/24/21 15:41	44,300.0	SH
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG1527601-1										
Chloride	ND		mg/l	0.500	0.083	1	-	07/24/21 15:41	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	07/24/21 15:41	44,300.0	SH

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138589
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1525600-2								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1525601-2								
Nitrogen, Nitrate	94		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1527009-2								
Dissolved Organic Carbon	98		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 Batch: WG1527601-2								
Chloride	99		-		90-110	-		
Fluoride	108		-		90-110	-		
Sulfate	100		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138589
Report Date: 07/28/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1525600-4 QC Sample: L2138589-03 Client ID: HA20-CMT-3D3-07192021												
Nitrogen, Nitrite	4.0	4	7.8	95		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1525601-4 QC Sample: L2138589-03 Client ID: HA20-CMT-3D3-07192021												
Nitrogen, Nitrate	42.	4	43	**25**	Q	-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1527009-4 QC Sample: L2138589-01 Client ID: HA20-CMT-2D2-07192021												
Dissolved Organic Carbon	1.3	16	18	101		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1527601-3 QC Sample: L2138589-01 Client ID: HA20-CMT-2D2-07192021												
Chloride	56.0	40	94.7	97		-	-		90-110	-		18
Fluoride	0.195	0.4	0.592	99		-	-		90-110	-		15
Sulfate	51.1	80	134	103		-	-		90-110	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138589
Report Date: 07/28/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1525600-3 QC Sample: L2138589-03 Client ID: HA20-CMT-3D3-07192021						
Nitrogen, Nitrite	4.0	3.9	mg/l	3		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1525601-3 QC Sample: L2138589-03 Client ID: HA20-CMT-3D3-07192021						
Nitrogen, Nitrate	42.	41	mg/l	2		6
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1527009-3 QC Sample: L2138589-01 Client ID: HA20-CMT-2D2-07192021						
Dissolved Organic Carbon	1.3	1.4	mg/l	7		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1527601-4 QC Sample: L2138589-01 Client ID: HA20-CMT-2D2-07192021						
Fluoride	0.195	0.196	mg/l	0		15
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1527601-4 QC Sample: L2138589-01 Client ID: HA20-CMT-2D2-07192021						
Chloride	56.0	56.7	mg/l	1		18
Sulfate	51.1	53.2	mg/l	4		20

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138589
Report Date: 07/28/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2138589-01A	Vial H2SO4 preserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L2138589-01B	Vial H2SO4 preserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L2138589-01C	Vial H2SO4 preserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L2138589-01D	Plastic 120ml unpreserved/No Headspace	A	NA		3.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138589-01E	Plastic 250ml unpreserved	A	7	7	3.2	Y	Absent		SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2138589-01F	Amber 250ml unpreserved	A	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138589-01G	Amber 250ml unpreserved	A	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138589-02A	Vial H2SO4 preserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L2138589-02B	Vial H2SO4 preserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L2138589-02C	Vial H2SO4 preserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L2138589-02D	Plastic 120ml unpreserved/No Headspace	A	NA		3.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138589-02E	Plastic 250ml unpreserved	A	7	7	3.2	Y	Absent		SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2138589-02F	Amber 250ml unpreserved	A	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138589-02G	Amber 250ml unpreserved	A	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138589-03A	Vial H2SO4 preserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L2138589-03B	Vial H2SO4 preserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L2138589-03C	Vial H2SO4 preserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L2138589-03D	Plastic 120ml unpreserved/No Headspace	A	NA		3.2	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138589-03E	Plastic 250ml unpreserved	A	7	7	3.2	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2138589-03F	Amber 250ml unpreserved	A	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138589-03G	Amber 250ml unpreserved	A	7	7	3.2	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS **Lab Number:** L2138589
Project Number: 131884-004 **Report Date:** 07/28/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name: NUCLEAR METALS **Lab Number:** L2138589
Project Number: 131884-004 **Report Date:** 07/28/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:07282112:42

A+A

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL — World Class Chemistry

Date Rec'd in Lab: 7/19/21	ALPHA Job #: L2138589

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: ~~3252H~~ 131884-004

Project Manager: ~~Nathan Hunt~~ K Alepidis

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com MKelley

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

KAlepidis e haleyaldrich.com

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program	Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes	☐ No	Are MCP Analytical Methods Required?
☐ Yes	☒ No	Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (SO4;Cl-;F-) (300)	Alkalinity (Carb/Bicarb) (SM 2320)				Sample Specific Comments	TOTAL # BOTTLES
38589-01	HA20-CMT-2D2-07192021	7/19/21	1030	AQ	SRP	☐	☒	☐	☒	☐	☐	☒	☒	☒	☐	☐	☐		7
-02	HA20-CMT-2D3-07192021	↓	1225	↓	↓	☐	☒	☐	☒	☐	☐	☒	☒	☒	☐	☐	☐		7
-03	HA20-CMT-3D3-07192021	↓	1435	↓	↓	☐	☒	☐	☒	☐	☐	☒	☒	☒	☐	☐	☐		7
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
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						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
			Container Type			V	A	A	P	P	P	V	P	P	P	-	-		
			Preservative			B	A	A	A	D	A	D	A	A	D	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
A. P[illegible]	7/19/21 1515	Rob [illegible]	AAL 7/19/21 1515
Rob [illegible]	7/19/15 1630	[illegible]	7/19/21 1635

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 5-JAN-12)

ANALYTICAL REPORT

Lab Number:	L2138779
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	131884-004
Report Date:	07/28/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2138779-01	HA20-CMT-3D4-07202021	WATER	CONCORD, MA	07/20/21 10:40	07/20/21
L2138779-02	HA20-CMT-3T(OW)-07202021	WATER	CONCORD, MA	07/20/21 13:30	07/20/21
L2138779-03	HA20-CMT-3T(OW)-07202021 DUP	WATER	CONCORD, MA	07/20/21 14:00	07/20/21

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138779
Project Number:	131884-004	**Report Date:**	07/28/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name: NUCLEAR METALS **Lab Number:** L2138779
Project Number: 131884-004 **Report Date:** 07/28/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Sample Receipt

L2138779-01: The sample identified as "HA20-CMT-3D4-07202021" on the chain of custody was identified as "HA20-CMT-3D3-07202021" on the container label. At the client's request, the sample is reported as "HA20-CMT-3D4-07202021".

Volatile Organics

L2138779-02 and -03: Initial calibration utilized a quadratic fit for: 1,1,2,2,-tetrachloroethane, 1,2,3-trichloropropane, naphthalene

In reference to question H:

The WG1527007-3/-4 LCS/LCSD recoveries, associated with L2138779-02 and -03, are below the individual acceptance criteria for 4-methyl-2-pentanone (LCSD 63%), 2-hexanone (64%/57%), naphthalene (69%/61%), and 1,4-dioxane (LCSD 60%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds. The LCS/LCSD RPD is above the acceptance criteria for 1,4-dioxane (26%).

L2138779-02 and -03: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

Semivolatile Organics

L2138779-03: The initial calibration utilized a quadratic fit for butyl benzyl phthalate.

In reference to question H:

The WG1527365-2/-3 LCS/LCSD recoveries, associated with L2138779-03, are below the acceptance criteria

Case Narrative (continued)

for aniline (30%/29%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated sample are reported; however, all results for this compound are considered to have a potentially low bias.

The WG1528344-2/-3 LCS/LCSD recoveries, associated with L2138779-02, are below the acceptance criteria for aniline (23%/19%); however, it has been identified as a "difficult" analyte and is within the 15-140% acceptance limits. The results of the associated sample are reported; however, all results for this compound are considered to have a potentially low bias.

Non-MCP Related Narratives

Dissolved Organic Carbon

The samples were field filtered; a filter blank was not received.

Nitrogen, Nitrate

The WG1526088-4 MS recovery, performed on L2138779-03, is outside the acceptance criteria for nitrogen, nitrate (0%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom Kelly Stenstrom

Title: Technical Director/Representative Date: 07/28/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS

Project Number: 131884-004

Lab Number: L2138779

Report Date: 07/28/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	Batch QC	WG1527007-3	2-Hexanone	LCS	64	70-130	02-03	potential low bias
8260C	Batch QC	WG1527007-3	Naphthalene	LCS	69	70-130	02-03	potential low bias
8260C	Batch QC	WG1527007-4	Methyl isobutyl ketone	LCSD	63	70-130	02-03	potential low bias
8260C	Batch QC	WG1527007-4	2-Hexanone	LCSD	57	70-130	02-03	potential low bias
8260C	Batch QC	WG1527007-4	Naphthalene	LCSD	61	70-130	02-03	potential low bias
8260C	Batch QC	WG1527007-4	1,4-Dioxane	LCSD	26	20	02-03	non-directional bias
8260C	Batch QC	WG1527007-4	1,4-Dioxane	LCSD	60	70-130	02-03	potential low bias
MCP Semivolatile Organics - Westborough Lab								
8270D	Batch QC	WG1527365-2	Aniline	LCS	30	40-140	03	potential low bias
8270D	Batch QC	WG1527365-3	Aniline	LCSD	29	40-140	03	potential low bias
8270D	Batch QC	WG1528344-2	Aniline	LCS	23	40-140	02	potential low bias
8270D	Batch QC	WG1528344-3	Aniline	LCSD	19	40-140	02	potential low bias
General Chemistry - Westborough Lab								
353.2	Batch QC (L2138779-03)	WG1526088-4	Nitrogen, Nitrate	MS	0	83-113	01-03	potential low bias

ORGANICS

VOLATILES

Project Name: NUCLEAR METALS **Lab Number:** L2138779

Project Number: 131884-004 **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID: L2138779-02
Client ID: HA20-CMT-3T(OW)-07202021
Sample Location: CONCORD, MA

Date Collected: 07/20/21 13:30
Date Received: 07/20/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 07/22/21 12:07
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	1.2		ug/l	1.0	0.21	1
Chloroform	2.6		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.92	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	0.25	J	ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	0.29	J	ug/l	2.0	0.20	1
Bromomethane	0.40	J	ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	5.2		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2138779
Project Number: 131884-004 **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID: L2138779-02 Date Collected: 07/20/21 13:30
Client ID: HA20-CMT-3T(OW)-07202021 Date Received: 07/20/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	5.9		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	1.7	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138779
Project Number:	131884-004	**Report Date:**	07/28/21

SAMPLE RESULTS

Lab ID:	L2138779-02	Date Collected:	07/20/21 13:30
Client ID:	HA20-CMT-3T(OW)-07202021	Date Received:	07/20/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	107		70-130

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138779
Project Number:	131884-004	**Report Date:**	07/28/21

SAMPLE RESULTS

Lab ID:	L2138779-03	Date Collected:	07/20/21 14:00
Client ID:	HA20-CMT-3T(OW)-07202021 DUP	Date Received:	07/20/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 07/22/21 11:36
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.68	1
1,1-Dichloroethane	1.1		ug/l	1.0	0.21	1
Chloroform	2.5		ug/l	1.0	0.22	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	0.16	J	ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	0.97	J	ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	0.28	J	ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.20	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	0.31	J	ug/l	2.0	0.20	1
Bromomethane	0.35	J	ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	5.3		ug/l	1.0	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1

Project Name: NUCLEAR METALS **Lab Number:** L2138779
Project Number: 131884-004 **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID: L2138779-03 Date Collected: 07/20/21 14:00
Client ID: HA20-CMT-3T(OW)-07202021 DUP Date Received: 07/20/21
Sample Location: CONCORD, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	5.9		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.17	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
Methyl ethyl ketone	ND		ug/l	5.0	1.9	1
Methyl isobutyl ketone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.15	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.20	1
o-Chlorotoluene	ND		ug/l	2.0	0.22	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1

Project Name: NUCLEAR METALS **Lab Number:** L2138779
Project Number: 131884-004 **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID:	L2138779-03	Date Collected:	07/20/21 14:00
Client ID:	HA20-CMT-3T(OW)-07202021 DUP	Date Received:	07/20/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Diethyl ether	ND		ug/l	2.0	0.16	1
Diisopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	75	J	ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	110		70-130

Project Name: NUCLEAR METALS **Lab Number:** L2138779
Project Number: 131884-004 **Report Date:** 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/22/21 06:04
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02-03 Batch: WG1527007-5					
Methylene chloride	ND		ug/l	2.0	0.68
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.22
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.40	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.40	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.40	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.20
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.20
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.17
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: NUCLEAR METALS **Lab Number:** L2138779
Project Number: 131884-004 **Report Date:** 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/22/21 06:04
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02-03 Batch: WG1527007-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.17
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene, Total	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
Methyl ethyl ketone	ND		ug/l	5.0	1.9
Methyl isobutyl ketone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.15
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.20
o-Chlorotoluene	ND		ug/l	2.0	0.22

Project Name: NUCLEAR METALS **Lab Number:** L2138779

Project Number: 131884-004 **Report Date:** 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/22/21 06:04
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02-03 Batch: WG1527007-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.35
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Diethyl ether	ND		ug/l	2.0	0.16
Diisopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	105		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02-03 Batch: WG1527007-3 WG1527007-4								
Methylene chloride	110		96		70-130	14		20
1,1-Dichloroethane	110		98		70-130	12		20
Chloroform	110		96		70-130	14		20
Carbon tetrachloride	120		100		70-130	18		20
1,2-Dichloropropane	99		87		70-130	13		20
Dibromochloromethane	93		84		70-130	10		20
1,1,2-Trichloroethane	90		80		70-130	12		20
Tetrachloroethene	110		99		70-130	11		20
Chlorobenzene	100		94		70-130	6		20
Trichlorofluoromethane	120		110		70-130	9		20
1,2-Dichloroethane	100		93		70-130	7		20
1,1,1-Trichloroethane	120		100		70-130	18		20
Bromodichloromethane	100		92		70-130	8		20
trans-1,3-Dichloropropene	94		86		70-130	9		20
cis-1,3-Dichloropropene	100		92		70-130	8		20
1,1-Dichloropropene	110		99		70-130	11		20
Bromoform	96		84		70-130	13		20
1,1,2,2-Tetrachloroethane	85		74		70-130	14		20
Benzene	110		98		70-130	12		20
Toluene	100		94		70-130	6		20
Ethylbenzene	110		99		70-130	11		20
Chloromethane	88		80		70-130	10		20
Bromomethane	99		92		70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02-03 Batch: WG1527007-3 WG1527007-4								
Vinyl chloride	98		92		70-130	6		20
Chloroethane	110		95		70-130	15		20
1,1-Dichloroethene	110		100		70-130	10		20
trans-1,2-Dichloroethene	110		100		70-130	10		20
Trichloroethene	110		98		70-130	12		20
1,2-Dichlorobenzene	97		87		70-130	11		20
1,3-Dichlorobenzene	100		91		70-130	9		20
1,4-Dichlorobenzene	98		89		70-130	10		20
Methyl tert butyl ether	92		82		70-130	11		20
p/m-Xylene	115		105		70-130	9		20
o-Xylene	115		100		70-130	14		20
cis-1,2-Dichloroethene	110		95		70-130	15		20
Dibromomethane	100		89		70-130	12		20
1,2,3-Trichloropropane	91		79		70-130	14		20
Styrene	110		100		70-130	10		20
Dichlorodifluoromethane	91		83		70-130	9		20
Acetone	73		74		70-130	1		20
Carbon disulfide	110		97		70-130	13		20
Methyl ethyl ketone	80		71		70-130	12		20
Methyl isobutyl ketone	71		**63**	Q	70-130	12		20
2-Hexanone	**64**	Q	**57**	Q	70-130	12		20
Bromochloromethane	110		92		70-130	18		20
Tetrahydrofuran	77		73		70-130	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02-03 Batch: WG1527007-3 WG1527007-4								
2,2-Dichloropropane	120		100		70-130	18		20
1,2-Dibromoethane	91		84		70-130	8		20
1,3-Dichloropropane	91		83		70-130	9		20
1,1,1,2-Tetrachloroethane	99		89		70-130	11		20
Bromobenzene	99		89		70-130	11		20
n-Butylbenzene	100		90		70-130	11		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	110		98		70-130	12		20
o-Chlorotoluene	110		96		70-130	14		20
p-Chlorotoluene	110		93		70-130	17		20
1,2-Dibromo-3-chloropropane	78		71		70-130	9		20
Hexachlorobutadiene	100		94		70-130	6		20
Isopropylbenzene	110		100		70-130	10		20
p-Isopropyltoluene	100		94		70-130	6		20
Naphthalene	**69**	Q	**61**	Q	70-130	12		20
n-Propylbenzene	110		100		70-130	10		20
1,2,3-Trichlorobenzene	81		73		70-130	10		20
1,2,4-Trichlorobenzene	86		77		70-130	11		20
1,3,5-Trimethylbenzene	100		91		70-130	9		20
1,2,4-Trimethylbenzene	99		87		70-130	13		20
Diethyl ether	92		84		70-130	9		20
Diisopropyl Ether	92		82		70-130	11		20
Ethyl-Tert-Butyl-Ether	92		83		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02-03 Batch: WG1527007-3 WG1527007-4								
Tertiary-Amyl Methyl Ether	91		82		70-130	10		20
1,4-Dioxane	78		**60**	Q	70-130	**26**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		100		70-130
Toluene-d8	99		98		70-130
4-Bromofluorobenzene	103		101		70-130
Dibromofluoromethane	102		103		70-130

SEMIVOLATILES

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138779
Project Number:	131884-004	**Report Date:**	07/28/21

SAMPLE RESULTS

Lab ID:	L2138779-01	Date Collected:	07/20/21 10:40
Client ID:	HA20-CMT-3D4-07202021	Date Received:	07/20/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	07/26/21 06:30
Analytical Date:	07/27/21 19:42		
Analyst:	DB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	2.93		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	55		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2138779
Project Number: 131884-004 | **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID: L2138779-02
Client ID: HA20-CMT-3T(OW)-07202021
Sample Location: CONCORD, MA

Date Collected: 07/20/21 13:30
Date Received: 07/20/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 07/27/21 19:28
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/27/21 10:37

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.28	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.97	1
Hexachloroethane	ND		ug/l	2.0	0.78	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1

Project Name: NUCLEAR METALS **Lab Number:** L2138779

Project Number: 131884-004 **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID:	L2138779-02	Date Collected:	07/20/21 13:30
Client ID:	HA20-CMT-3T(OW)-07202021	Date Received:	07/20/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Pentachlorophenol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Project Name: NUCLEAR METALS **Lab Number:** L2138779

Project Number: 131884-004 **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID:	L2138779-02	Date Collected:	07/20/21 13:30
Client ID:	HA20-CMT-3T(OW)-07202021	Date Received:	07/20/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		15-110
Phenol-d6	47		15-110
Nitrobenzene-d5	93		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	73		15-110
4-Terphenyl-d14	87		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2138779
Project Number: 131884-004 | **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID:	L2138779-02	Date Collected:	07/20/21 13:30
Client ID:	HA20-CMT-3T(OW)-07202021	Date Received:	07/20/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	07/26/21 06:30
Analytical Date:	07/27/21 20:06		
Analyst:	DB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	40.8		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	54		15-110

Project Name: NUCLEAR METALS **Lab Number:** L2138779
Project Number: 131884-004 **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID: L2138779-03
Client ID: HA20-CMT-3T(OW)-07202021 DUP
Sample Location: CONCORD, MA

Date Collected: 07/20/21 14:00
Date Received: 07/20/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 07/26/21 15:35
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 07/23/21 19:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.28	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.97	1
Hexachloroethane	ND		ug/l	2.0	0.78	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1

Project Name: NUCLEAR METALS | **Lab Number:** L2138779
Project Number: 131884-004 | **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID:	L2138779-03	Date Collected:	07/20/21 14:00
Client ID:	HA20-CMT-3T(OW)-07202021 DUP	Date Received:	07/20/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	3.0	1
2-Nitrophenol	ND		ug/l	10	0.90	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
Pentachlorophenol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.65	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Project Name:	NUCLEAR METALS	**Lab Number:**	L2138779
Project Number:	131884-004	**Report Date:**	07/28/21

SAMPLE RESULTS

Lab ID:	L2138779-03	Date Collected:	07/20/21 14:00
Client ID:	HA20-CMT-3T(OW)-07202021 DUP	Date Received:	07/20/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		15-110
Phenol-d6	21		15-110
Nitrobenzene-d5	73		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	44		15-110
4-Terphenyl-d14	71		30-130

Project Name: NUCLEAR METALS | **Lab Number:** L2138779
Project Number: 131884-004 | **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID: L2138779-03
Client ID: HA20-CMT-3T(OW)-07202021 DUP
Sample Location: CONCORD, MA

Date Collected: 07/20/21 14:00
Date Received: 07/20/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/27/21 20:29
Analyst: DB

Extraction Method: EPA 3510C
Extraction Date: 07/26/21 06:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	41.0		ug/l	0.139	0.0694	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	54		15-110

Project Name: NUCLEAR METALS | **Lab Number:** L2138779
Project Number: 131884-004 | **Report Date:** 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 07/26/21 08:09
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/23/21 19:06

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03 Batch: WG1527365-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138779
Report Date: 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 07/26/21 08:09
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/23/21 19:06

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03 Batch: WG1527365-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 07/26/21 08:09
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/23/21 19:06

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03 Batch: WG1527365-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		15-110
Phenol-d6	38		15-110
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	66		30-130
2,4,6-Tribromophenol	43		15-110
4-Terphenyl-d14	67		30-130

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 07/27/21 12:50
Analyst: DB

Extraction Method: EPA 3510C
Extraction Date: 07/26/21 06:30

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1527749-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	51		15-110

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 07/27/21 19:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/27/21 10:37

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 02 Batch: WG1528344-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.28
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.97
Hexachloroethane	ND		ug/l	2.0	0.78
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.6
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 07/27/21 19:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/27/21 10:37

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 02 Batch: WG1528344-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.73
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	3.0
2-Nitrophenol	ND		ug/l	10	0.90
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.65
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Project Name: NUCLEAR METALS **Lab Number:** L2138779
Project Number: 131884-004 **Report Date:** 07/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 07/27/21 19:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/27/21 10:37

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 02 Batch: WG1528344-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		15-110
Phenol-d6	44		15-110
Nitrobenzene-d5	68		30-130
2-Fluorobiphenyl	52		30-130
2,4,6-Tribromophenol	66		15-110
4-Terphenyl-d14	65		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG1527365-2 WG1527365-3								
Acenaphthene	62		60		40-140	3		20
1,2,4-Trichlorobenzene	61		59		40-140	3		20
Hexachlorobenzene	67		67		40-140	0		20
Bis(2-chloroethyl)ether	51		50		40-140	2		20
2-Chloronaphthalene	61		61		40-140	0		20
1,2-Dichlorobenzene	57		54		40-140	5		20
1,3-Dichlorobenzene	56		53		40-140	6		20
1,4-Dichlorobenzene	57		54		40-140	5		20
3,3'-Dichlorobenzidine	52		57		40-140	9		20
2,4-Dinitrotoluene	71		74		40-140	4		20
2,6-Dinitrotoluene	67		71		40-140	6		20
Azobenzene	54		55		40-140	2		20
Fluoranthene	63		66		40-140	5		20
4-Bromophenyl phenyl ether	65		65		40-140	0		20
Bis(2-chloroisopropyl)ether	49		46		40-140	6		20
Bis(2-chloroethoxy)methane	54		54		40-140	0		20
Hexachlorobutadiene	63		62		40-140	2		20
Hexachloroethane	55		52		40-140	6		20
Isophorone	51		50		40-140	2		20
Naphthalene	57		57		40-140	0		20
Nitrobenzene	60		58		40-140	3		20
Bis(2-ethylhexyl)phthalate	64		64		40-140	0		20
Butyl benzyl phthalate	59		62		40-140	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG1527365-2 WG1527365-3								
Di-n-butylphthalate	53		54		40-140	2		20
Di-n-octylphthalate	61		64		40-140	5		20
Diethyl phthalate	59		58		40-140	2		20
Dimethyl phthalate	59		61		40-140	3		20
Benzo(a)anthracene	66		68		40-140	3		20
Benzo(a)pyrene	69		73		40-140	6		20
Benzo(b)fluoranthene	75		79		40-140	5		20
Benzo(k)fluoranthene	62		66		40-140	6		20
Chrysene	66		70		40-140	6		20
Acenaphthylene	57		61		40-140	7		20
Anthracene	63		64		40-140	2		20
Benzo(ghi)perylene	70		75		40-140	7		20
Fluorene	62		61		40-140	2		20
Phenanthrene	62		63		40-140	2		20
Dibenzo(a,h)anthracene	67		72		40-140	7		20
Indeno(1,2,3-cd)pyrene	67		70		40-140	4		20
Pyrene	61		65		40-140	6		20
Aniline	**30**	Q	**29**	Q	40-140	3		20
4-Chloroaniline	50		49		40-140	2		20
Dibenzofuran	62		61		40-140	2		20
2-Methylnaphthalene	58		58		40-140	0		20
Acetophenone	52		51		40-140	2		20
2,4,6-Trichlorophenol	68		71		30-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG1527365-2 WG1527365-3								
2-Chlorophenol	60		58		30-130	3		20
2,4-Dichlorophenol	65		64		30-130	2		20
2,4-Dimethylphenol	50		49		30-130	2		20
2-Nitrophenol	74		71		30-130	4		20
4-Nitrophenol	59		63		30-130	7		20
2,4-Dinitrophenol	94		97		30-130	3		20
Pentachlorophenol	59		59		30-130	0		20
Phenol	40		39		30-130	3		20
2-Methylphenol	53		52		30-130	2		20
3-Methylphenol/4-Methylphenol	56		55		30-130	2		20
2,4,5-Trichlorophenol	69		71		30-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	57		56		15-110
Phenol-d6	45		45		15-110
Nitrobenzene-d5	70		68		30-130
2-Fluorobiphenyl	68		70		30-130
2,4,6-Tribromophenol	84		88		15-110
4-Terphenyl-d14	68		74		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1527749-2 WG1527749-3								
1,4-Dioxane	108		111		40-140	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	52		54		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1528344-2 WG1528344-3								
Acenaphthene	64		69		40-140	8		20
1,2,4-Trichlorobenzene	57		59		40-140	3		20
Hexachlorobenzene	64		72		40-140	12		20
Bis(2-chloroethyl)ether	63		63		40-140	0		20
2-Chloronaphthalene	58		60		40-140	3		20
1,2-Dichlorobenzene	56		57		40-140	2		20
1,3-Dichlorobenzene	56		56		40-140	0		20
1,4-Dichlorobenzene	58		57		40-140	2		20
3,3'-Dichlorobenzidine	62		69		40-140	11		20
2,4-Dinitrotoluene	73		86		40-140	16		20
2,6-Dinitrotoluene	66		73		40-140	10		20
Azobenzene	75		84		40-140	11		20
Fluoranthene	65		74		40-140	13		20
4-Bromophenyl phenyl ether	65		73		40-140	12		20
Bis(2-chloroisopropyl)ether	64		64		40-140	0		20
Bis(2-chloroethoxy)methane	66		69		40-140	4		20
Hexachlorobutadiene	53		53		40-140	0		20
Hexachloroethane	61		62		40-140	2		20
Isophorone	59		64		40-140	8		20
Naphthalene	58		59		40-140	2		20
Nitrobenzene	70		71		40-140	1		20
Bis(2-ethylhexyl)phthalate	87		99		40-140	13		20
Butyl benzyl phthalate	76		88		40-140	15		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1528344-2 WG1528344-3								
Di-n-butylphthalate	73		82		40-140	12		20
Di-n-octylphthalate	81		92		40-140	13		20
Diethyl phthalate	72		80		40-140	11		20
Dimethyl phthalate	62		70		40-140	12		20
Benzo(a)anthracene	69		80		40-140	15		20
Benzo(a)pyrene	66		75		40-140	13		20
Benzo(b)fluoranthene	67		82		40-140	20		20
Benzo(k)fluoranthene	68		70		40-140	3		20
Chrysene	72		79		40-140	9		20
Acenaphthylene	56		60		40-140	7		20
Anthracene	68		77		40-140	12		20
Benzo(ghi)perylene	68		77		40-140	12		20
Fluorene	64		72		40-140	12		20
Phenanthrene	66		75		40-140	13		20
Dibenzo(a,h)anthracene	65		74		40-140	13		20
Indeno(1,2,3-cd)pyrene	64		73		40-140	13		20
Pyrene	63		71		40-140	12		20
Aniline	**23**	Q	**19**	Q	40-140	19		20
4-Chloroaniline	55		55		40-140	0		20
Dibenzofuran	63		68		40-140	8		20
2-Methylnaphthalene	59		59		40-140	0		20
Acetophenone	59		61		40-140	3		20
2,4,6-Trichlorophenol	63		68		30-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG1528344-2 WG1528344-3								
2-Chlorophenol	66		67		30-130	2		20
2,4-Dichlorophenol	65		71		30-130	9		20
2,4-Dimethylphenol	63		68		30-130	8		20
2-Nitrophenol	73		79		30-130	8		20
4-Nitrophenol	76		87		30-130	13		20
2,4-Dinitrophenol	87		102		30-130	16		20
Pentachlorophenol	63		72		30-130	13		20
Phenol	53		58		30-130	9		20
2-Methylphenol	63		67		30-130	6		20
3-Methylphenol/4-Methylphenol	64		70		30-130	9		20
2,4,5-Trichlorophenol	63		69		30-130	9		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	68		70		15-110
Phenol-d6	59		64		15-110
Nitrobenzene-d5	79		82		30-130
2-Fluorobiphenyl	61		65		30-130
2,4,6-Tribromophenol	80		94		15-110
4-Terphenyl-d14	73		82		30-130

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

SAMPLE RESULTS

Lab ID: L2138779-01
Client ID: HA20-CMT-3D4-07202021
Sample Location: CONCORD, MA

Date Collected: 07/20/21 10:40
Date Received: 07/20/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Alkalinity, Bicarbonate	148.		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Nitrogen, Nitrite	0.032	J	mg/l	0.050	0.014	1	-	07/21/21 07:27	44,353.2	EL
Nitrogen, Nitrate	0.18		mg/l	0.10	0.023	1	-	07/21/21 07:27	44,353.2	EL
Dissolved Organic Carbon	11.		mg/l	4.0	0.17	4	-	07/23/21 04:58	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	46.2		mg/l	0.500	0.083	1	-	07/24/21 16:36	44,300.0	SH
Fluoride	0.562		mg/l	0.050	0.037	1	-	07/24/21 16:36	44,300.0	SH
Sulfate	84.6		mg/l	1.00	0.454	1	-	07/24/21 16:36	44,300.0	SH

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

SAMPLE RESULTS

Lab ID: L2138779-02
Client ID: HA20-CMT-3T(OW)-07202021
Sample Location: CONCORD, MA

Date Collected: 07/20/21 13:30
Date Received: 07/20/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Alkalinity, Bicarbonate	71.9		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Nitrogen, Nitrite	1.4		mg/l	0.050	0.014	1	-	07/21/21 07:28	44,353.2	EL
Nitrogen, Nitrate	190		mg/l	5.0	1.1	50	-	07/21/21 10:55	44,353.2	EL
Phosphorus, Total	0.082		mg/l	0.010	0.004	1	07/21/21 07:50	07/22/21 12:15	121,4500P-E	SD
Phosphorus, Orthophosphate	0.020		mg/l	0.005	0.001	1	-	07/21/21 04:59	121,4500P-E	KA
Dissolved Organic Carbon	2.0		mg/l	1.0	0.04	1	-	07/23/21 04:58	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	33.0		mg/l	0.500	0.083	1	-	07/24/21 16:47	44,300.0	SH
Fluoride	0.226		mg/l	0.050	0.037	1	-	07/24/21 16:47	44,300.0	SH
Sulfate	80.8		mg/l	10.0	4.54	10	-	07/24/21 22:14	44,300.0	SH

Project Name: NUCLEAR METALS | **Lab Number:** L2138779
Project Number: 131884-004 | **Report Date:** 07/28/21

SAMPLE RESULTS

Lab ID: L2138779-03
Client ID: HA20-CMT-3T(OW)-07202021 DUP
Sample Location: CONCORD, MA
Date Collected: 07/20/21 14:00
Date Received: 07/20/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Alkalinity, Bicarbonate	72.9		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
Nitrogen, Nitrite	1.5		mg/l	0.050	0.014	1	-	07/21/21 07:30	44,353.2	EL
Nitrogen, Nitrate	180		mg/l	5.0	1.1	50	-	07/21/21 10:57	44,353.2	EL
Phosphorus, Total	0.097		mg/l	0.010	0.004	1	07/21/21 07:50	07/22/21 12:16	121,4500P-E	SD
Phosphorus, Orthophosphate	0.039		mg/l	0.005	0.001	1	-	07/21/21 05:00	121,4500P-E	KA
Dissolved Organic Carbon	2.1		mg/l	1.0	0.04	1	-	07/23/21 04:58	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	33.5		mg/l	0.500	0.083	1	-	07/24/21 17:30	44,300.0	SH
Fluoride	0.191		mg/l	0.050	0.037	1	-	07/24/21 17:30	44,300.0	SH
Sulfate	76.7		mg/l	10.0	4.54	10	-	07/24/21 22:25	44,300.0	SH

Project Name: NUCLEAR METALS **Lab Number:** L2138779
Project Number: 131884-004 **Report Date:** 07/28/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526088-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	07/21/21 07:12	44,353.2	EL
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526089-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	07/21/21 07:14	44,353.2	EL
General Chemistry - Westborough Lab for sample(s): 02-03 Batch: WG1526119-1										
Phosphorus, Orthophosphate	0.002	J	mg/l	0.005	0.001	1	-	07/21/21 04:56	121,4500P-E	KA
General Chemistry - Westborough Lab for sample(s): 02-03 Batch: WG1526190-1										
Phosphorus, Total	ND		mg/l	0.010	0.004	1	07/21/21 07:50	07/22/21 11:46	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526680-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1526682-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	07/22/21 09:36	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1527009-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	07/23/21 04:58	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG1527601-1										
Fluoride	ND		mg/l	0.050	0.037	1	-	07/24/21 15:41	44,300.0	SH
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG1527601-1										
Chloride	ND		mg/l	0.500	0.083	1	-	07/24/21 15:41	44,300.0	SH
Sulfate	ND		mg/l	1.00	0.454	1	-	07/24/21 15:41	44,300.0	SH

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1526088-2								
Nitrogen, Nitrate	104		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1526089-2								
Nitrogen, Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 02-03 Batch: WG1526119-2								
Phosphorus, Orthophosphate	105		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02-03 Batch: WG1526190-2								
Phosphorus, Total	108		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1527009-2								
Dissolved Organic Carbon	98		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 Batch: WG1527601-2								
Chloride	99		-		90-110	-		
Fluoride	108		-		90-110	-		
Sulfate	100		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526088-4 QC Sample: L2138779-03 Client ID: HA20-CMT-3T(OW)-07202021 DUP												
Nitrogen, Nitrate	180	4	180	**0**	Q	-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526089-4 QC Sample: L2138779-03 Client ID: HA20-CMT-3T(OW)-07202021 DUP												
Nitrogen, Nitrite	1.5	4	5.3	95		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02-03 QC Batch ID: WG1526119-4 QC Sample: L2138779-03 Client ID: HA20-CMT-3T(OW)-07202021 DUP												
Phosphorus, Orthophosphate	0.039	0.5	0.487	90		-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2138779
Report Date: 07/28/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526088-3 QC Sample: L2138779-03 Client ID: HA20-CMT-3T(OW)-07202021 DUP						
Nitrogen, Nitrate	180	190	mg/l	5		6
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1526089-3 QC Sample: L2138779-03 Client ID: HA20-CMT-3T(OW)-07202021 DUP						
Nitrogen, Nitrite	1.5	1.5	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 02-03 QC Batch ID: WG1526119-3 QC Sample: L2138779-02 Client ID: HA20-CMT-3T(OW)-07202021						
Phosphorus, Orthophosphate	0.020	0.020	mg/l	0		20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2138779-01D	Vial H2SO4 preserved	A	NA		2.5	Y	Absent		DOC-9060(28)
L2138779-01E	Vial H2SO4 preserved	A	NA		2.5	Y	Absent		DOC-9060(28)
L2138779-01F	Vial H2SO4 preserved	A	NA		2.5	Y	Absent		DOC-9060(28)
L2138779-01G	Plastic 120ml unpreserved/No Headspace	A	NA		2.5	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138779-01H	Plastic 250ml unpreserved	A	7	7	2.5	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2138779-01K	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138779-01L	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138779-02A	Vial HCl preserved	A	NA		2.5	Y	Absent		MCP-8260-10(14)
L2138779-02B	Vial HCl preserved	A	NA		2.5	Y	Absent		MCP-8260-10(14)
L2138779-02C	Vial HCl preserved	A	NA		2.5	Y	Absent		MCP-8260-10(14)
L2138779-02D	Vial H2SO4 preserved	A	NA		2.5	Y	Absent		DOC-9060(28)
L2138779-02E	Vial H2SO4 preserved	A	NA		2.5	Y	Absent		DOC-9060(28)
L2138779-02F	Vial H2SO4 preserved	A	NA		2.5	Y	Absent		DOC-9060(28)
L2138779-02G	Plastic 120ml unpreserved/No Headspace	A	NA		2.5	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138779-02H	Plastic 250ml unpreserved	A	7	7	2.5	Y	Absent		SO4-300(28),CL-300(28),F-300(28),NO2-353(2),NO3-353(2)
L2138779-02I	Plastic 250ml unpreserved	A	7	7	2.5	Y	Absent		OPHOS-4500(2)
L2138779-02J	Plastic 250ml H2SO4 preserved	A	<2	<2	2.5	Y	Absent		TPHOS-4500(28)
L2138779-02K	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138779-02L	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138779-02M	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		MCP-8270-10-LVI(7)
L2138779-02N	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		MCP-8270-10-LVI(7)
L2138779-03A	Vial HCl preserved	A	NA		2.5	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2138779-03B	Vial HCl preserved	A	NA		2.5	Y	Absent		MCP-8260-10(14)
L2138779-03C	Vial HCl preserved	A	NA		2.5	Y	Absent		MCP-8260-10(14)
L2138779-03D	Vial H2SO4 preserved	A	NA		2.5	Y	Absent		DOC-9060(28)
L2138779-03E	Vial H2SO4 preserved	A	NA		2.5	Y	Absent		DOC-9060(28)
L2138779-03F	Vial H2SO4 preserved	A	NA		2.5	Y	Absent		DOC-9060(28)
L2138779-03G	Plastic 120ml unpreserved/No Headspace	A	NA		2.5	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2138779-03H	Plastic 250ml unpreserved	A	7	7	2.5	Y	Absent		SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2138779-03I	Plastic 250ml unpreserved	A	7	7	2.5	Y	Absent		OPHOS-4500(2)
L2138779-03J	Plastic 250ml H2SO4 preserved	A	<2	<2	2.5	Y	Absent		TPHOS-4500(28)
L2138779-03K	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138779-03L	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2138779-03M	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		MCP-8270-10-LVI(7)
L2138779-03N	Amber 250ml unpreserved	A	7	7	2.5	Y	Absent		MCP-8270-10-LVI(7)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 7/20/21

ALPHA Job #: L2138779

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: ~~3252H~~ 131884-004

Project Manager: ~~Nathan Hunt~~ K Alepidis

ALPHA Quote #:

Client Information

Client: de maximis, inc.

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com MKelley KAlepidis

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's (8260C)	1,4-Dioxane (8270D-SIM w/ I.D.)	SVOC's (8270D)	Nitrate / Nitrite (353.2)	Total Phosphorous (SM 4500P-E)	Ortho-phosphate (SM 4500P-E)	Dissolved Organic Carbon (9060)	Total Anions (SO4;Cl-;F-) (300)	Alkalinity (Carb/Bicarb) (SM 2320)				Sample Specific Comments	TOTAL # BOTTLES
38779-1	HA20-CMT-3DH-07202021	7/20/21	1040	AQ	SRP	☐	☒	☐	☒	☐	☐	☒	☒	☒	☐	☐	☐		7
-2	HA20-CMT-3T(OW)-07202021	↓	1330	↓	↓	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
-3	HA20-CMT-3T(OW)-07202021 DUP	↓	1400	↓	↓	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		14
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
					Container Type	V	A	A	P	P	P	V	P	P	P	-	-		
					Preservative	B	A	A	A	D	A	D	A	A	O	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
A Pol 7/20/21 1450		MaM MuIL AA	7/20/21 1450
MaM	7/20/21 1535	[signature]	7/20/21 1535

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 5-JAN-12)

Method Blank Summary
Form 4
Volatiles

Client	**: de maximis, inc.**	**Lab Number**	**: L2138779**
Project Name	**: NUCLEAR METALS**	**Project Number**	**: 131884-004**
Lab Sample ID	**: WG1527007-5**	**Lab File ID**	**: VQ210722A04**
Instrument ID	**: QUIMBY**		
Matrix	**: WATER**	**Analysis Date**	**: 07/22/21 06:04**

Client Sample No.	Lab Sample ID	Analysis Date
WG1527007-3LCS	WG1527007-3	07/22/21 04:34
WG1527007-4LCSD	WG1527007-4	07/22/21 05:04
HA20-CMT-3T(OW)-07202021 DUP	L2138779-03	07/22/21 11:36
HA20-CMT-3T(OW)-07202021	L2138779-02	07/22/21 12:07

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2138779	
Project Name	: NUCLEAR METALS	Project Number	: 131884-004	
Instrument ID	: QUIMBY	Calibration Date	: 07/22/21 04:34	
Lab File ID	: VQ210722A01	Init. Calib. Date(s)	: 07/16/21	07/16/21
Sample No	: WG1527007-2	Init. Calib. Times	: 04:22	09:27
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	73	0
Dichlorodifluoromethane	0.569	0.519	-	8.8	20	61	.01
Chloromethane	0.548	0.482	-	12	20	56	0
Vinyl chloride	0.556	0.548	-	1.4	20	62	.01
Bromomethane	0.367	0.363	-	1.1	20	71	.01
Chloroethane	10	10.67	-	-6.7	20	74	0
Trichlorofluoromethane	0.906	1.082	-	-19.4	20	85	.02
Ethyl ether	0.24	0.222	-	7.5	20	65	.02
1,1-Dichloroethene	0.436	0.481	-	-10.3	20	78	.02
Carbon disulfide	1.39	1.494	-	-7.5	20	75	.02
Methylene chloride	0.49	0.53	-	-8.2	20	79	.01
Acetone	10	7.334	-	26.7*	20	54	0
trans-1,2-Dichloroethene	0.485	0.553	-	-14	20	83	.01
Methyl tert-butyl ether	1.187	1.088	-	8.3	20	65	.02
Diisopropyl ether	1.336	1.233	-	7.7	20	64	0
1,1-Dichloroethane	0.962	1.069	-	-11.1	20	80	0
Ethyl tert-butyl ether	1.256	1.152	-	8.3	20	64	.01
cis-1,2-Dichloroethene	0.524	0.559	-	-6.7	20	77	.01
2,2-Dichloropropane	0.932	1.089	-	-16.8	20	84	0
Bromochloromethane	0.214	0.228	-	-6.5	20	78	0
Chloroform	1.035	1.121	-	-8.3	20	83	0
Carbon tetrachloride	0.868	1.039	-	-19.7	20	89	0
Tetrahydrofuran	0.083	0.064	-	22.9*	20	53	0
Dibromofluoromethane	0.267	0.273	-	-2.2	20	78	0
1,1,1-Trichloroethane	0.901	1.068	-	-18.5	20	86	0
2-Butanone	0.1	0.08*	-	20	20	58	0
1,1-Dichloropropene	0.696	0.776	-	-11.5	20	78	0
Benzene	1.968	2.171	-	-10.3	20	78	0
tert-Amyl methyl ether	1.13	1.029	-	8.9	20	65	0
1,2-Dichloroethane-d4	0.329	0.327	-	0.6	20	74	0
1,2-Dichloroethane	0.682	0.715	-	-4.8	20	77	.01
Trichloroethene	0.558	0.621	-	-11.3	20	83	0
Dibromomethane	0.238	0.241	-	-1.3	20	73	0
1,2-Dichloropropane	0.485	0.48	-	1	20	71	0
Bromodichloromethane	0.747	0.773	-	-3.5	20	79	0
1,4-Dioxane	500	392.896	-	21.4*	20	56	0
cis-1,3-Dichloropropene	0.763	0.805	-	-5.5	20	72	0
Chlorobenzene-d5	1	1	-	0	20	75	0
Toluene-d8	1.285	1.268	-	1.3	20	73	0
Toluene	1.646	1.705	-	-3.6	20	78	0
4-Methyl-2-pentanone	0.106	0.075*	-	29.2*	20	56	0
Tetrachloroethene	0.711	0.788	-	-10.8	20	85	0
trans-1,3-Dichloropropene	0.875	0.827	-	5.5	20	70	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: de maximis, inc.	Lab Number	: L2138779	
Project Name	: NUCLEAR METALS	Project Number	: 131884-004	
Instrument ID	: QUIMBY	Calibration Date	: 07/22/21 04:34	
Lab File ID	: VQ210722A01	Init. Calib. Date(s)	: 07/16/21	07/16/21
Sample No	: WG1527007-2	Init. Calib. Times	: 04:22	09:27
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.358	0.321	-	10.3	20	69	0
Chlorodibromomethane	0.562	0.522	-	7.1	20	74	0
1,3-Dichloropropane	0.767	0.699	-	8.9	20	69	0
1,2-Dibromoethane	0.395	0.36	-	8.9	20	70	0
2-Hexanone	0.187	0.12	-	35.8*	20	51	0
Chlorobenzene	1.712	1.784	-	-4.2	20	79	0
Ethylbenzene	3.056	3.387	-	-10.8	20	78	0
1,1,1,2-Tetrachloroethane	0.701	0.693	-	1.1	20	79	0
p/m Xylene	1.135	1.314	-	-15.8	20	80	0
o Xylene	1.081	1.235	-	-14.2	20	79	0
Styrene	20	22.331	-	-11.7	20	79	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	76	0
Bromoform	10	9.575	-	4.3	20	72	0
Isopropylbenzene	5.007	5.686	-	-13.6	20	79	0
4-Bromofluorobenzene	0.86	0.883	-	-2.7	20	74	0
Bromobenzene	1.151	1.135	-	1.4	20	79	0
n-Propylbenzene	5.971	6.714	-	-12.4	20	79	0
1,1,2,2-Tetrachloroethane	10	8.531	-	14.7	20	65	0
2-Chlorotoluene	4.492	4.854	-	-8.1	20	80	0
1,3,5-Trimethylbenzene	3.62	3.777	-	-4.3	20	80	0
1,2,3-Trichloropropane	10	9.079	-	9.2	20	70	0
4-Chlorotoluene	3.967	4.206	-	-6	20	79	0
tert-Butylbenzene	3.692	4.111	-	-11.3	20	80	0
1,2,4-Trimethylbenzene	3.204	3.185	-	0.6	20	79	0
sec-Butylbenzene	5.331	5.994	-	-12.4	20	79	0
p-Isopropyltoluene	4.16	4.393	-	-5.6	20	79	0
1,3-Dichlorobenzene	2.563	2.625	-	-2.4	20	82	0
1,4-Dichlorobenzene	2.517	2.47	-	1.9	20	79	0
n-Butylbenzene	3.231	3.318	-	-2.7	20	79	0
1,2-Dichlorobenzene	2.295	2.231	-	2.8	20	79	0
1,2-Dibromo-3-chloropropan	10	7.839	-	21.6*	20	65	0
Hexachlorobutadiene	0.944	0.944	-	0	20	82	0
1,2,4-Trichlorobenzene	0.875	0.751	-	14.2	20	74	0
Naphthalene	10	6.896	-	31*	20	62	0
1,2,3-Trichlorobenzene	0.771	0.625	-	18.9	20	69	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L2150411
Client:	de maximis, inc. 200 Day Hill Road; Suite 200 Windsor, CT 06095
ATTN:	Nathan Hunt
Phone:	(860) 298-0541
Project Name:	NUCLEAR METALS
Project Number:	131884-004
Report Date:	09/27/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2150411
Report Date: 09/27/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2150411-01	HA20-CMT-101-09172021	WATER	CONCORD, MA	09/17/21 12:30	09/17/21

Project Name:	NUCLEAR METALS	**Lab Number:**	L2150411
Project Number:	131884-004	**Report Date:**	09/27/21

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: NUCLEAR METALS **Lab Number:** L2150411
Project Number: 131884-004 **Report Date:** 09/27/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

Non-MCP Related Narratives

Nitrogen, Nitrate

The WG1547903-4 MS recovery, performed on L2150411-01, is outside the acceptance criteria for nitrogen, nitrate (115%); however, the associated LCS recovery is within criteria. No further action was taken.

Anions by Ion Chromatography

The WG1550197-3 MS recovery, performed on L2150411-01, is outside the acceptance criteria for fluoride (112%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 09/27/21

QC OUTLIER SUMMARY REPORT

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2150411
Report Date: 09/27/21

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
Anions by Ion Chromatography - Westborough Lab								
300.0	Batch QC (L2150411-01)	WG1550197-3	Fluoride	MS	112	90-110	01	potential high bias
General Chemistry - Westborough Lab								
353.2	Batch QC (L2150411-01)	WG1547903-4	Nitrogen, Nitrate	MS	115	83-113	01	potential high bias

ORGANICS

SEMIVOLATILES

Project Name:	NUCLEAR METALS	**Lab Number:**	L2150411
Project Number:	131884-004	**Report Date:**	09/27/21

SAMPLE RESULTS

Lab ID:	L2150411-01	Date Collected:	09/17/21 12:30
Client ID:	HA20-CMT-101-09172021	Date Received:	09/17/21
Sample Location:	CONCORD, MA	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	97,8270D-SIM	Extraction Date:	09/24/21 10:38
Analytical Date:	09/27/21 10:24		
Analyst:	DB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.196		ug/l	0.134	0.0670	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	53		15-110

Project Name:	NUCLEAR METALS	**Lab Number:**	L2150411
Project Number:	131884-004	**Report Date:**	09/27/21

Method Blank Analysis
Batch Quality Control

Analytical Method:	97,8270D-SIM	Extraction Method:	EPA 3510C
Analytical Date:	09/27/21 09:16	Extraction Date:	09/24/21 10:38
Analyst:	DB		

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01 Batch: WG1550362-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	65		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004
Lab Number: L2150411
Report Date: 09/27/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01 Batch: WG1550362-2 WG1550362-3								
1,4-Dioxane	111		113		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	65		67		15-110

INORGANICS
&
MISCELLANEOUS

Project Name: NUCLEAR METALS | **Lab Number:** L2150411
Project Number: 131884-004 | **Report Date:** 09/27/21

SAMPLE RESULTS

Lab ID: L2150411-01
Client ID: HA20-CMT-101-09172021
Sample Location: CONCORD, MA

Date Collected: 09/17/21 12:30
Date Received: 09/17/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	09/20/21 14:42	121,2320B	JB
Alkalinity, Bicarbonate	132.		mg CaCO3/L	2.00	NA	1	-	09/20/21 14:42	121,2320B	JB
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	09/18/21 08:06	44,353.2	MR
Nitrogen, Nitrate	0.023	J	mg/l	0.10	0.023	1	-	09/18/21 08:06	44,353.2	MR
Dissolved Organic Carbon	12.		mg/l	4.0	0.17	4	-	09/22/21 05:06	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	86.8		mg/l	2.50	0.420	5	-	09/23/21 22:55	44,300.0	AT
Fluoride	0.520		mg/l	0.250	0.185	5	-	09/23/21 22:55	44,300.0	AT
Sulfate	124.		mg/l	5.00	2.27	5	-	09/23/21 22:55	44,300.0	AT

Project Name: NUCLEAR METALS **Lab Number:** L2150411
Project Number: 131884-004 **Report Date:** 09/27/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1547901-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.014	1	-	09/18/21 06:07	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1547903-1										
Nitrogen, Nitrate	ND		mg/l	0.10	0.023	1	-	09/18/21 06:04	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1548437-1										
Alkalinity, Bicarbonate	ND		mg CaCO3/L	2.00	NA	1	-	09/20/21 14:42	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1548471-1										
Alkalinity, Carbonate	ND		mg CaCO3/L	2.00	NA	1	-	09/20/21 14:42	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1549182-1										
Dissolved Organic Carbon	0.05	J	mg/l	1.0	0.04	1	-	09/22/21 05:06	1,9060A	DW
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1550197-1										
Chloride	ND		mg/l	0.500	0.083	1	-	09/23/21 18:00	44,300.0	AT
Fluoride	ND		mg/l	0.050	0.037	1	-	09/23/21 18:00	44,300.0	AT
Sulfate	ND		mg/l	1.00	0.454	1	-	09/23/21 18:00	44,300.0	AT

Lab Control Sample Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2150411
Report Date: 09/27/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1547901-2								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1547903-2								
Nitrogen, Nitrate	92		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1549182-2								
Dissolved Organic Carbon	99		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1550197-2								
Chloride	99		-		90-110	-		
Fluoride	102		-		90-110	-		
Sulfate	97		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2150411
Report Date: 09/27/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1547903-4 QC Sample: L2150411-01 Client ID: HA20-CMT-101-09172021												
Nitrogen, Nitrate	0.023J	4	4.6	**115**	Q	-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1549182-4 QC Sample: L2150411-01 Client ID: HA20-CMT-101-09172021												
Dissolved Organic Carbon	12.	32	46	108		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1550197-3 QC Sample: L2150411-01 Client ID: HA20-CMT-101-09172021												
Chloride	86.8	20	108	108		-	-		90-110	-		18
Fluoride	0.520	2	2.76	**112**	Q	-	-		90-110	-		15
Sulfate	124.	40	165	103		-	-		90-110	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NUCLEAR METALS
Project Number: 131884-004

Lab Number: L2150411
Report Date: 09/27/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1547903-3 QC Sample: L2150411-01 Client ID: HA20-CMT-101-09172021						
Nitrogen, Nitrate	0.023J	ND	mg/l	NC		6
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1548437-2 QC Sample: L2150411-01 Client ID: HA20-CMT-101-09172021						
Alkalinity, Bicarbonate	132.	130	mg CaCO3/L	2		9
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1548471-2 QC Sample: L2150411-01 Client ID: HA20-CMT-101-09172021						
Alkalinity, Carbonate	ND	ND	mg CaCO3/L	NC		10
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1549182-3 QC Sample: L2150411-01 Client ID: HA20-CMT-101-09172021						
Dissolved Organic Carbon	12.	12	mg/l	0		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1550197-4 QC Sample: L2150411-01 Client ID: HA20-CMT-101-09172021						
Chloride	86.8	86.9	mg/l	0		18
Fluoride	0.520	0.541	mg/l	4		15
Sulfate	124.	124	mg/l	0		20

Project Name: NUCLEAR METALS

Project Number: 131884-004

Lab Number: L2150411

Report Date: 09/27/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2150411-01A	Vial H2SO4 preserved	A	NA		2.3	Y	Absent		DOC-9060(28)
L2150411-01B	Vial H2SO4 preserved	A	NA		2.3	Y	Absent		DOC-9060(28)
L2150411-01C	Vial H2SO4 preserved	A	NA		2.3	Y	Absent		DOC-9060(28)
L2150411-01D	Plastic 250ml unpreserved	A	7	7	2.3	Y	Absent		SO4-300(28),F-300(28),CL-300(28),NO2-353(2),NO3-353(2)
L2150411-01E	Plastic 120ml unpreserved/No Headspace	A	NA		2.3	Y	Absent		ALK-HCO3-2320(14),ALK-CO3-2320(14)
L2150411-01F	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)
L2150411-01G	Amber 250ml unpreserved	A	7	7	2.3	Y	Absent		A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: NUCLEAR METALS **Lab Number:** L2150411
Project Number: 131884-004 **Report Date:** 09/27/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL — World Class Chemistry

Date Rec'd in Lab: 9/17/21

ALPHA Job #: L2150411

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: ~~3252H~~ 131884-004

Project Manager: ~~Amy Hoffmann~~ K Alepidis

ALPHA Quote #:

Client Information

Client: de maximis, inc

Address: 200 Day Hill Road

Windsor, CT

Phone: 978-793-7163

Fax:

Email: ahoffmann@demaximis.com MKelley K Alepidis

☒ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 3252H

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report
I.D = Isotope Dilution

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 Dioxane (8270D-SIM-ID)	Nitrite/Nitrate (353.2)	DOC (9060)	Total Anions (SO4, Cl, F) 300	Alkalinity (Carb/Bicarb) SM2320	Sample Specific Comments	TOTAL # BOTTLES
50411-01	HA20-CMT-101-09172021	9/17	1230	AQ	SRP	☒	☒	☒	☒	☒		7
Container Type						V	A	-	-	-		
Preservative						B	A	-	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
A. P...	9/17/21 1355	[illegible] Daniel DAVU SAAC	9/17/21 1355
Daniel DAVU C Ade	9-17-21 1530	[illegible]	9-17 1530

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 5-JAN-12)

GEL Laboratories Reports

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 05, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 540069

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 09, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04052021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540069

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Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540069

May 05, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 09, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
540069001	GZW-9-1-04052021
540069002	GZW-9-1-04052021
540069003	MW-S36-04052021
540069004	MW-S36-04052021
540069005	MW-S07-04052021
540069006	MW-S07-04052021
540069007	HA20-CMT-3B(OW)-04052021
540069008	HA20-CMT-3B(OW)-04052021
540069009	MW-SD29-04052021
540069010	MW-SD29-04052021
540069011	MW-SD36-04052021
540069012	MW-SD36-04052021
540069013	MW-SD60-04052021
540069014	MW-SD60-04052021
540069015	MW-BS15-04052021
540069016	MW-BS15-04052021
540069017	MW-BM15-04052021
540069018	MW-BM15-04052021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]: 04052021
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

540069

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) — NI	Dissolved Metals (6020A ICP-MS) — NI	U-235/U-238 plus Total U Calc. — NI								Comments (Preservative Type (6)) Note: extra sample is required for sample specific QC
GZW-9-1-04052021	4/5/2021	11:55	N	Y	GW	U238		2	X	X	X								Total and Diss. ICP-MS List:
MW-S36-04052021	4/5/2021	11:55	N	Y	GW	U238		2	X	X	X								Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
MW-S07-04052021	4/5/2021	12:15	N	Y	GW	U238		2	X	X	X								
HA20-CMT-3B(OW)-04052021	4/5/2021	14:00	N	Y	GW	U238		2	X	X	X								
MW-SD29-04052021	4/5/2021	14:25	N	Y	GW	U238		2	X	X	X								
MW-SD36-04052021	4/5/2021	15:20	N	Y	GW	U238		2	X	X	X								
MW-SD60-04052021	4/5/2021	15:05	N	Y	GW	U238		2	X	X	X								
MW-BS15-04052021	4/5/2021	12:40	N	Y	GW	U238		2	X	X	X								
MW-BM15-04052021	4/5/2021	14:00	N	Y	GW	U238		2	X	X	X								

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/7/21	1315	1	[signature]	4/7/21	1315
2	[signature]	4/7/21	1500	2	[signature]	4/9/21	1010
3				3			

TAT Requested: Normal: X Rush: ____ Specify: ______
Fax Results: [ ] Yes [X] No
Select Deliverable: [X] C of A [X] QC Summary [X] Level 5
Additional Remarks:
For Lab Receiving Use Only: Custody Seal Intact? [ ] *Yes* [ ] *No* **Cooler Temp:** ____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)
Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via NaI. MM

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 540069
Received By: S L BOONE	Date Received: APRIL 9, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7733 7887 5412 5°c 7733 7887 5136 4°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓	✓		Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:_______
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7733 7887 5397 4°c 7733 7887 5228 3°c

PM (or PMA) review: Initials CA Date 4/12/21 Page 1 of 1

GL-CHL-SR-001 Rev 7

Work Order Containers

Sample ID: **540069001**
Client Sample ID: **GZW−9−1−04052021**
Description: **Ground Water**

Label: 540069001.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069001.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069002**
Client Sample ID: **GZW−9−1−04052021**
Description: **Dissolved Ground Water**

Label: 540069002.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069002.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069003**
Client Sample ID: **MW−S36−04052021**
Description: **Ground Water**

Label: 540069003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to

Work Order Containers

Sample ID: **540069003**
Client Sample ID: **MW−S36−04052021**
Description: **Ground Water**

Label: 540069003.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069003.01.01 | **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069004**
Client Sample ID: **MW−S36−04052021**
Description: **Dissolved Ground Water**

Label: 540069004.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069004.01.01 | **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069005**
Client Sample ID: **MW−S07−04052021**
Description: **Ground Water**

Label: 540069005.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540069005**
Client Sample ID: **MW−S07−04052021**
Description: **Ground Water**

Label: 540069005.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069006**
Client Sample ID: **MW−S07−04052021**
Description: **Dissolved Ground Water**

Label: 540069006.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069006.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069007**
Client Sample ID: **HA20−CMT−3B(OW)−04052021**
Description: **Ground Water**

Label: 540069007.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069007.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: 540069008
Client Sample ID: HA20−CMT−3B(OW)−04052021
Description: Dissolved Ground Water

Label: 540069008.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069008.01.01	**Type: New Undefined**	
29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540069009
Client Sample ID: MW−SD29−04052021
Description: Ground Water

Label: 540069009.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069009.01.01	**Type: New Undefined**	
29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540069010
Client Sample ID: MW−SD29−04052021
Description: Dissolved Ground Water

Label: 540069010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to

Work Order Containers

Sample ID: **540069010**
Client Sample ID: **MW−SD29−04052021**
Description: **Dissolved Ground Water**

Label: 540069010.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069010.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069011**
Client Sample ID: **MW−SD36−04052021**
Description: **Ground Water**

Label: 540069011.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069011.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069012**
Client Sample ID: **MW−SD36−04052021**
Description: **Dissolved Ground Water**

Label: 540069012.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540069012**
Client Sample ID: **MW−SD36−04052021**
Description: **Dissolved Ground Water**

Label: 540069012.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069013**
Client Sample ID: **MW−SD60−04052021**
Description: **Ground Water**

Label: 540069013.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069013.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069014**
Client Sample ID: **MW−SD60−04052021**
Description: **Dissolved Ground Water**

Label: 540069014.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069014.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540069015**
Client Sample ID: **MW−BS15−04052021**
Description: **Ground Water**

Label: 540069015.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069015.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069016**
Client Sample ID: **MW−BS15−04052021**
Description: **Dissolved Ground Water**

Label: 540069016.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540069016.01.01 **Type: New Undefined**

29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069017**
Client Sample ID: **MW−BM15−04052021**
Description: **Ground Water**

Label: 540069017.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to

Work Order Containers

Sample ID: **540069017**
Client Sample ID: **MW−BM15−04052021**
Description: **Ground Water**

Label: 540069017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540069017.01.01	**Type: New Undefined**	
29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540069018**
Client Sample ID: **MW−BM15−04052021**
Description: **Dissolved Ground Water**

Label: 540069018.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:44:17	Ridge Gleaton	Transfered custody to batch 2113877
09−APR−21 17:44:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113877 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540069018.01.01	**Type: New Undefined**	
29−APR−21 16:08:30	Paul Boyd	Transfered custody to batch 2113878
29−APR−21 16:08:30	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 05 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 540069

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 34
Analytical Batch: 2113878

Product: **Inorganic Calculations**
Analytical Method: SW846 6020
Analytical Procedure: GL-GC-E-107 REV# 10
Analytical Batch: 2123947

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2113877

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
540069001	GZW-9-1-04052021
540069002	GZW-9-1-04052021
540069003	MW-S36-04052021
540069004	MW-S36-04052021
540069005	MW-S07-04052021
540069006	MW-S07-04052021
540069007	HA20-CMT-3B(OW)-04052021
540069008	HA20-CMT-3B(OW)-04052021
540069009	MW-SD29-04052021
540069010	MW-SD29-04052021
540069011	MW-SD36-04052021
540069012	MW-SD36-04052021
540069013	MW-SD60-04052021
540069014	MW-SD60-04052021
540069015	MW-BS15-04052021
540069016	MW-BS15-04052021
540069017	MW-BM15-04052021
540069018	MW-BM15-04052021
1204792934	Method Blank (MB)**ICP-MS**
1204792935	Laboratory Control Sample (LCS)
1204792938	540069001(GZW-9-1-04052021L) Serial Dilution (SD)
1204792936	540069001(GZW-9-1-04052021S) Matrix Spike (MS)
1204792937	540069001(GZW-9-1-04052021SD) Matrix Spike Duplicate (MSD)

Samples 540069001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017 and 018 in this SDG were analyzed for metals on an "as received" basis.
Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

<u>Calibration Information</u>

CRDL/PQL Requirements
The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calicum. Client sample concentrations were greater than two times the CRDL; therefore the data were not adversely affected. 540069015 (MW-BS15-04052021) and 540069016 (MW-BS15-04052021)-ICP-MS.

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

<u>Technical Information</u>

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 540069003 (MW-S36-04052021), 540069004 (MW-S36-04052021), 540069007 (HA20-CMT-3B(OW)-04052021), 540069008 (HA20-CMT-3B(OW)-04052021), 540069011 (MW-SD36-04052021), 540069012 (MW-SD36-04052021), 540069013 (MW-SD60-04052021), 540069014 (MW-SD60-04052021), 540069015 (MW-BS15-04052021) and 540069016 (MW-BS15-04052021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	540069									
	003	**004**	**007**	**008**	**011**	**012**	**013**	**014**	**015**	**016**
Calcium	1X	1X	1X	1X	1X	1X	1X	1X	10X	10X
Iron	1X	1X	1X	1X	10X	10X	1X	1X	1X	1X
Manganese	10X	10X	1X	1X	1X	1X	1X	1X	1X	1X
Sodium	10X	10X	10X	10X	1X	1X	1X	1X	10X	10X
Uranium-238	1X	1X	1X	1X	1X	1X	2X	2X	1X	1X

<u>Certification Statement</u>

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 540069 GEL Work Order: 540069

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

** Indicates analyte is a surrogate compound.

J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

U Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Jamie Johnson**

Date: 06 MAY 2021 **Title: Group Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069001 **BASIS:** As Received **DATE COLLECTED** 05-APR-21

CLIENT ID: GZW-9-1-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-39-3	Barium	15.4	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-70-2	Calcium	14500	ug/L		80.0	200	200	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 10:56	210504-6	2113878
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7439-89-6	Iron	38.3	ug/L	J	33.0	100	100	1	MS	PRB	05/05/21 10:56	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7439-95-4	Magnesium	3170	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7439-96-5	Manganese	1.80	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7439-98-7	Molybdenum	0.227	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-09-7	Potassium	2200	ug/L		80.0	300	300	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-23-5	Sodium	38800	ug/L		80.0	250	250	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 10:35	210430-1	2113878
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 10:35	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 17:33	210430-4	2113878
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 17:33	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069002 **BASIS:** Filtered **DATE COLLECTED** 05−APR−21

CLIENT ID: GZW−9−1−04052021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−39−3	Barium	14.7	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−70−2	Calcium	14300	ug/L		80.0	200	200	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:07	210504−6	2113878
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−50−8	Copper	0.519	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/05/21 11:07	210504−6	2113878
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7439−95−4	Magnesium	3130	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7439−96−5	Manganese	1.56	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−02−0	Nickel	0.754	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−09−7	Potassium	2150	ug/L		80.0	300	300	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−23−5	Sodium	38200	ug/L		80.0	250	250	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 10:47	210430−1	2113878
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 10:47	210430−1	2113878
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 17:58	210430−4	2113878
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 17:58	210430−4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069003 **BASIS:** As Received **DATE COLLECTED** 05−APR−21

CLIENT ID: MW−S36−04052021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	38.7	ug/L	J	19.3	50.0	50.0	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−39−3	Barium	71.0	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−70−2	Calcium	33100	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:09	210504−6	2113878
7440−48−4	Cobalt	10.1	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−50−8	Copper	1.72	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7439−89−6	Iron	101	ug/L		33.0	100	100	1	MS	PRB	05/05/21 11:09	210504−6	2113878
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7439−95−4	Magnesium	7010	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7439−96−5	Manganese	2210	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 12:47	210503−5	2113878
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−02−0	Nickel	8.45	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−09−7	Potassium	6110	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−23−5	Sodium	212000	ug/L		800	2500	2500	10	MS	PRB	05/03/21 12:47	210503−5	2113878
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−61−1	Total Uranium	0.0749	ug/L	J	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 10:49	210430−1	2113878
7440−61−1	Uranium−238	0.0749	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/30/21 10:49	210430−1	2113878
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:02	210430−4	2113878
7440−66−6	Zinc	4.21	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:02	210430−4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069004 **BASIS:** Filtered **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-S36-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-39-3	Barium	70.6	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-70-2	Calcium	32500	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:11	210504-6	2113878
7440-48-4	Cobalt	9.89	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-50-8	Copper	1.18	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/05/21 11:11	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7439-95-4	Magnesium	6870	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7439-96-5	Manganese	2130	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 12:49	210503-5	2113878
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-02-0	Nickel	8.29	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-09-7	Potassium	5960	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-23-5	Sodium	204000	ug/L		800	2500	2500	10	MS	PRB	05/03/21 12:49	210503-5	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 10:51	210430-1	2113878
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 10:51	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:06	210430-4	2113878
7440-66-6	Zinc	4.10	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:06	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069005 **BASIS:** As Received **DATE COLLECTED** 05−APR−21

CLIENT ID: MW−S07−04052021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	187	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−36−0	Antimony	1.13	ug/L	J	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−39−3	Barium	22.7	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−70−2	Calcium	20000	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:13	210504−6	2113878
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−50−8	Copper	0.733	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7439−89−6	Iron	275	ug/L		33.0	100	100	1	MS	PRB	05/05/21 11:13	210504−6	2113878
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7439−95−4	Magnesium	4860	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7439−96−5	Manganese	6.16	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−02−0	Nickel	4.84	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−09−7	Potassium	3220	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−23−5	Sodium	24300	ug/L		80.0	250	250	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−61−1	Total Uranium	0.892	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 10:53	210430−1	2113878
7440−61−1	Uranium−238	0.892	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 10:53	210430−1	2113878
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:09	210430−4	2113878
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:09	210430−4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069006 **BASIS:** Filtered **DATE COLLECTED** 05−APR−21

CLIENT ID: MW−S07−04052021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−36−0	Antimony	1.18	ug/L	J	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−39−3	Barium	20.9	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−70−2	Calcium	20000	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:15	210504−6	2113878
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−50−8	Copper	0.608	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7439−89−6	Iron	38.5	ug/L	J	33.0	100	100	1	MS	PRB	05/05/21 11:15	210504−6	2113878
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7439−95−4	Magnesium	4820	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7439−96−5	Manganese	2.65	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−02−0	Nickel	4.79	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−09−7	Potassium	3170	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−23−5	Sodium	24600	ug/L		80.0	250	250	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−61−1	Total Uranium	0.542	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 10:54	210430−1	2113878
7440−61−1	Uranium−238	0.542	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 10:54	210430−1	2113878
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:13	210430−4	2113878
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:13	210430−4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069007 **BASIS:** As Received **DATE COLLECTED** 05−APR−21

CLIENT ID: HA20−CMT−3B(OW)−04052 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	181	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−38−2	Arsenic	27.6	ug/L		2.00	5.00	5.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−39−3	Barium	17.4	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−70−2	Calcium	34200	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:17	210504−6	2113878
7440−48−4	Cobalt	0.598	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−50−8	Copper	0.969	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7439−89−6	Iron	242	ug/L		33.0	100	100	1	MS	PRB	05/05/21 11:17	210504−6	2113878
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7439−95−4	Magnesium	9360	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7439−96−5	Manganese	399	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7439−98−7	Molybdenum	90.2	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−02−0	Nickel	1.14	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−09−7	Potassium	5360	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−23−5	Sodium	66400	ug/L		800	2500	2500	10	MS	PRB	05/03/21 12:51	210503−5	2113878
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−61−1	Total Uranium	45.9	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.332	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 10:56	210430−1	2113878
7440−61−1	Uranium−238	45.6	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 10:56	210430−1	2113878
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:16	210430−4	2113878
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:16	210430−4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069008 **BASIS:** Filtered **DATE COLLECTED** 05-APR-21

CLIENT ID: HA20-CMT-3B(OW)-04052 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	21.4	ug/L	J	19.3	50.0	50.0	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-38-2	Arsenic	27.0	ug/L		2.00	5.00	5.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-39-3	Barium	16.4	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-70-2	Calcium	33700	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:19	210504-6	2113878
7440-48-4	Cobalt	0.451	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7439-89-6	Iron	35.8	ug/L	J	33.0	100	100	1	MS	PRB	05/05/21 11:19	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7439-95-4	Magnesium	9130	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7439-96-5	Manganese	383	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7439-98-7	Molybdenum	89.3	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-02-0	Nickel	1.16	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-09-7	Potassium	5180	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-23-5	Sodium	63000	ug/L		800	2500	2500	10	MS	PRB	05/03/21 12:53	210503-5	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-61-1	Total Uranium	45.4	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.332	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:01	210430-1	2113878
7440-61-1	Uranium-238	45.1	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:01	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:20	210430-4	2113878
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:20	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069009 **BASIS:** As Received **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-SD29-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-39-3	Barium	9.81	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-70-2	Calcium	17900	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:21	210504-6	2113878
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/05/21 11:21	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7439-95-4	Magnesium	5300	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7439-96-5	Manganese	2.94	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7439-98-7	Molybdenum	23.7	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-02-0	Nickel	1.02	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-09-7	Potassium	3170	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-23-5	Sodium	28300	ug/L		80.0	250	250	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:03	210430-1	2113878
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:03	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:24	210430-4	2113878
7440-66-6	Zinc	3.85	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:24	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069010 **BASIS:** Filtered **DATE COLLECTED** 05−APR−21

CLIENT ID: MW−SD29−04052021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−39−3	Barium	9.70	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−70−2	Calcium	17900	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:22	210504−6	2113878
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−50−8	Copper	0.494	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/05/21 11:22	210504−6	2113878
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7439−95−4	Magnesium	5210	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7439−96−5	Manganese	2.54	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7439−98−7	Molybdenum	24.6	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−02−0	Nickel	0.990	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−09−7	Potassium	3160	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−23−5	Sodium	27900	ug/L		80.0	250	250	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:05	210430−1	2113878
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:05	210430−1	2113878
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:34	210430−4	2113878
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:34	210430−4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069011 **BASIS:** As Received **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-SD36-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1690	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-38-2	Arsenic	5.17	ug/L		2.00	5.00	5.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-39-3	Barium	87.1	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-70-2	Calcium	46500	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:28	210504-6	2113878
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-50-8	Copper	1.28	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7439-89-6	Iron	42200	ug/L		330	1000	1000	10	MS	PRB	05/05/21 11:30	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7439-95-4	Magnesium	15300	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7439-96-5	Manganese	857	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7439-98-7	Molybdenum	0.335	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-02-0	Nickel	1.01	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-09-7	Potassium	6330	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-23-5	Sodium	37700	ug/L		80.0	250	250	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-61-1	Total Uranium	0.139	ug/L	J	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:07	210430-1	2113878
7440-61-1	Uranium-238	0.139	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:07	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:38	210430-4	2113878
7440-66-6	Zinc	5.64	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:38	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069012 **BASIS:** Filtered **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-SD36-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	87.8	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-38-2	Arsenic	3.67	ug/L	J	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-39-3	Barium	88.1	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-70-2	Calcium	41900	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:32	210504-6	2113878
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7439-89-6	Iron	30200	ug/L		330	1000	1000	10	MS	PRB	05/05/21 11:34	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7439-95-4	Magnesium	13400	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7439-96-5	Manganese	647	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7439-98-7	Molybdenum	0.213	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-09-7	Potassium	6460	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-23-5	Sodium	38900	ug/L		80.0	250	250	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:09	210430-1	2113878
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:09	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:42	210430-4	2113878
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:42	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069013 **BASIS:** As Received **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-SD60-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	57.6	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-39-3	Barium	4.02	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-70-2	Calcium	21400	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:36	210504-6	2113878
7440-48-4	Cobalt	0.362	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-50-8	Copper	15.5	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7439-89-6	Iron	91.1	ug/L	J	33.0	100	100	1	MS	PRB	05/05/21 11:36	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7439-95-4	Magnesium	4900	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7439-96-5	Manganese	6.21	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7439-98-7	Molybdenum	2.66	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-02-0	Nickel	1.63	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-09-7	Potassium	3530	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-23-5	Sodium	30600	ug/L		80.0	250	250	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-61-1	Total Uranium	155	ug/L		0.134	0.400	0.400			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.300	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:10	210430-1	2113878
7440-61-1	Uranium-238	154	ug/L		0.134	0.400	0.400	2	MS	PRB	04/30/21 11:22	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:45	210430-4	2113878
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:45	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069014 **BASIS:** Filtered **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-SD60-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-39-3	Barium	3.72	ug/L	J	0.670	4.00	4.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-70-2	Calcium	21100	ug/L		80.0	200	200	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:38	210504-6	2113878
7440-48-4	Cobalt	0.336	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-50-8	Copper	13.9	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/05/21 11:38	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7439-95-4	Magnesium	4800	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7439-96-5	Manganese	5.64	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7439-98-7	Molybdenum	2.67	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-02-0	Nickel	1.88	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-09-7	Potassium	3460	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-23-5	Sodium	30100	ug/L		80.0	250	250	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-61-1	Total Uranium	125	ug/L		0.134	0.400	0.400			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.256	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:18	210430-1	2113878
7440-61-1	Uranium-238	125	ug/L		0.134	0.400	0.400	2	MS	PRB	04/30/21 11:24	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:49	210430-4	2113878
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:49	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069015 **BASIS:** As Received **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-BS15-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	69.0	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-39-3	Barium	25.2	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-70-2	Calcium	127000	ug/L		800	2000	2000	10	MS	PRB	05/03/21 12:55	210503-5	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:40	210504-6	2113878
7440-48-4	Cobalt	15.5	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-50-8	Copper	1.02	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7439-89-6	Iron	661	ug/L		33.0	100	100	1	MS	PRB	05/05/21 11:40	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7439-95-4	Magnesium	30800	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7439-96-5	Manganese	636	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7439-98-7	Molybdenum	5.79	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-02-0	Nickel	4.66	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-09-7	Potassium	12700	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-23-5	Sodium	80900	ug/L		800	2500	2500	10	MS	PRB	05/03/21 12:55	210503-5	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-61-1	Total Uranium	5.48	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0382	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:26	210430-1	2113878
7440-61-1	Uranium-238	5.44	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:26	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:53	210430-4	2113878
7440-66-6	Zinc	6.92	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:53	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069016 **BASIS:** Filtered **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-BS15-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-39-3	Barium	21.9	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-70-2	Calcium	128000	ug/L		800	2000	2000	10	MS	PRB	05/03/21 12:56	210503-5	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:42	210504-6	2113878
7440-48-4	Cobalt	10.7	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-50-8	Copper	0.449	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7439-89-6	Iron	420	ug/L		33.0	100	100	1	MS	PRB	05/05/21 11:42	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7439-95-4	Magnesium	31600	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7439-96-5	Manganese	579	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7439-98-7	Molybdenum	6.08	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-02-0	Nickel	4.39	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-09-7	Potassium	13300	ug/L		80.0	300	300	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-23-5	Sodium	83700	ug/L		800	2500	2500	10	MS	PRB	05/03/21 12:56	210503-5	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-61-1	Total Uranium	5.57	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0419	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:28	210430-1	2113878
7440-61-1	Uranium-238	5.53	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:28	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:56	210430-4	2113878
7440-66-6	Zinc	4.88	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 18:56	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069017 **BASIS:** As Received **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-BM15-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2510	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-38-2	Arsenic	4.40	ug/L	J	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-39-3	Barium	92.5	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-70-2	Calcium	39100	ug/L		80.0	200	200	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-47-3	Chromium	8.62	ug/L	J	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:44	210504-6	2113878
7440-48-4	Cobalt	18.5	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-50-8	Copper	10.8	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7439-89-6	Iron	6080	ug/L		33.0	100	100	1	MS	PRB	05/05/21 11:44	210504-6	2113878
7439-92-1	Lead	2.48	ug/L		0.500	2.00	2.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7439-95-4	Magnesium	15500	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7439-96-5	Manganese	175	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7439-98-7	Molybdenum	3.32	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-02-0	Nickel	7.72	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-09-7	Potassium	6060	ug/L		80.0	300	300	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-22-4	Silver	0.733	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-23-5	Sodium	25500	ug/L		80.0	250	250	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-29-1	Thorium	1.22	ug/L	J	0.700	2.00	2.00	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-61-1	Total Uranium	0.759	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:29	210430-1	2113878
7440-61-1	Uranium-238	0.759	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:29	210430-1	2113878
7440-62-2	Vanadium	4.59	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:00	210430-4	2113878
7440-66-6	Zinc	15.7	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:00	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540069 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540069018 **BASIS:** Filtered **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-BM15-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-39-3	Barium	58.5	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-70-2	Calcium	39400	ug/L		80.0	200	200	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 11:46	210504-6	2113878
7440-48-4	Cobalt	2.02	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-50-8	Copper	0.312	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7439-89-6	Iron	812	ug/L		33.0	100	100	1	MS	PRB	05/05/21 11:46	210504-6	2113878
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7439-95-4	Magnesium	15300	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7439-96-5	Manganese	101	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7439-98-7	Molybdenum	2.38	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-09-7	Potassium	5290	ug/L		80.0	300	300	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-23-5	Sodium	26100	ug/L		80.0	250	250	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-61-1	Total Uranium	0.0707	ug/L	J	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:31	210430-1	2113878
7440-61-1	Uranium-238	0.0707	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:31	210430-1	2113878
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:03	210430-4	2113878
7440-66-6	Zinc	4.91	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:03	210430-4	2113878

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113878	2113877	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.35	ug/L	0.36	ug/L	98.4	90.0 − 110.0	MS	30−APR−21 10:08	210430−1
	Uranium−238	49.3	ug/L	49.64	ug/L	99.2	90.0 − 110.0	MS	30−APR−21 10:08	210430−1
	Aluminum	5210	ug/L	5050	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Antimony	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Arsenic	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Barium	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Beryllium	53.3	ug/L	50	ug/L	106.6	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Cadmium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Calcium	5100	ug/L	5000	ug/L	102	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Cobalt	52.7	ug/L	50	ug/L	105.4	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Copper	53.4	ug/L	50	ug/L	106.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Lead	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Magnesium	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Manganese	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Molybdenum	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Nickel	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Potassium	5160	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Selenium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Silver	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Sodium	5470	ug/L	5000	ug/L	109.5	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Thallium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Thorium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Vanadium	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Zinc	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Calcium	5110	ug/L	5000	ug/L	102.1	90.0 − 110.0	MS	03−MAY−21 12:23	210503−5
	Manganese	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	03−MAY−21 12:23	210503−5
	Sodium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	03−MAY−21 12:23	210503−5
	Chromium	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	05−MAY−21 10:38	210504−6
	Iron	5130	ug/L	5000	ug/L	102.6	90.0 − 110.0	MS	05−MAY−21 10:38	210504−6
CCV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	98.7	90.0 − 110.0	MS	30−APR−21 10:17	210430−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Uranium−238	49.4	ug/L	49.64	ug/L	99.5	90.0 − 110.0	MS	30−APR−21 10:17	210430−1
	Aluminum	5110	ug/L	5050	ug/L	101.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Antimony	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Arsenic	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Barium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Beryllium	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Cadmium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Calcium	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Cobalt	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Copper	52.8	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Lead	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Magnesium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Manganese	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Molybdenum	52.7	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Nickel	52.6	ug/L	50	ug/L	105.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Potassium	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Selenium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Silver	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Sodium	5380	ug/L	5000	ug/L	107.6	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Thallium	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Thorium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Vanadium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Zinc	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	03−MAY−21 12:33	210503−5
	Manganese	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	03−MAY−21 12:33	210503−5
	Sodium	5200	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	03−MAY−21 12:33	210503−5
	Chromium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	05−MAY−21 10:48	210504−6
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	05−MAY−21 10:48	210504−6
CCV02										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 10:44	210430−1
	Uranium−238	49.4	ug/L	49.64	ug/L	99.5	90.0 − 110.0	MS	30−APR−21 10:44	210430−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Aluminum	5180	ug/L	5050	ug/L	102.6	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Antimony	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Arsenic	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Barium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Beryllium	53	ug/L	50	ug/L	106.1	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Cadmium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Cobalt	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Copper	53.2	ug/L	50	ug/L	106.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Lead	52.3	ug/L	50	ug/L	104.7	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Magnesium	5210	ug/L	5000	ug/L	104.2	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Manganese	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Molybdenum	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Nickel	52.9	ug/L	50	ug/L	105.8	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Potassium	5210	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Selenium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Silver	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Sodium	5430	ug/L	5000	ug/L	108.7	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Thorium	54.9	ug/L	50	ug/L	109.8	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Vanadium	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Zinc	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	03−MAY−21 12:39	210503−5
	Manganese	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	03−MAY−21 12:39	210503−5
	Sodium	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	MS	03−MAY−21 12:39	210503−5
	Chromium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	05−MAY−21 11:03	210504−6
	Iron	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	05−MAY−21 11:03	210504−6
CCV03										
	Uranium−235	0.35	ug/L	0.36	ug/L	98.3	90.0 − 110.0	MS	30−APR−21 10:58	210430−1
	Uranium−238	48.9	ug/L	49.64	ug/L	98.5	90.0 − 110.0	MS	30−APR−21 10:58	210430−1
	Aluminum	5110	ug/L	5050	ug/L	101.2	90.0 − 110.0	MS	30−APR−21 17:51	210430−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Antimony	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Arsenic	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Barium	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Beryllium	52.4	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Cadmium	52	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Calcium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Cobalt	52	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Copper	52.5	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Lead	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Magnesium	5140	ug/L	5000	ug/L	102.9	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Manganese	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Molybdenum	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Nickel	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Potassium	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Selenium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Silver	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Sodium	5400	ug/L	5000	ug/L	108	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Thallium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Thorium	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Vanadium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Zinc	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	30−APR−21 17:51	210430−4
	Calcium	5040	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	03−MAY−21 12:58	210503−5
	Manganese	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	03−MAY−21 12:58	210503−5
	Sodium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	03−MAY−21 12:58	210503−5
	Chromium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 11:24	210504−6
	Iron	4850	ug/L	5000	ug/L	97.1	90.0 − 110.0	MS	05−MAY−21 11:24	210504−6
CCV04										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.8	90.0 − 110.0	MS	30−APR−21 11:14	210430−1
	Uranium−238	49.1	ug/L	49.64	ug/L	99	90.0 − 110.0	MS	30−APR−21 11:14	210430−1
	Aluminum	5060	ug/L	5050	ug/L	100.2	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Antimony	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	30−APR−21 18:27	210430−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Arsenic	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Barium	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Beryllium	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Cadmium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Cobalt	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Copper	52	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Lead	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Magnesium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Manganese	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Molybdenum	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Nickel	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Potassium	5040	ug/L	5000	ug/L	100.8	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Selenium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Silver	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Sodium	5300	ug/L	5000	ug/L	106	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Thallium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Thorium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Vanadium	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Zinc	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 18:27	210430−4
	Chromium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	05−MAY−21 11:47	210504−6
	Iron	4960	ug/L	5000	ug/L	99.1	90.0 − 110.0	MS	05−MAY−21 11:47	210504−6
CCV05										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.9	90.0 − 110.0	MS	30−APR−21 11:33	210430−1
	Uranium−238	48.7	ug/L	49.64	ug/L	98.2	90.0 − 110.0	MS	30−APR−21 11:33	210430−1
	Aluminum	5040	ug/L	5050	ug/L	99.8	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Antimony	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Arsenic	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Barium	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Beryllium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Cadmium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 19:07	210430−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Cobalt	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Copper	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Lead	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Manganese	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Molybdenum	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Nickel	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Potassium	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Selenium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Silver	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Sodium	5330	ug/L	5000	ug/L	106.6	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Thallium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Thorium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Vanadium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Zinc	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 19:07	210430−4

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0012	ug/L	.0014	ug/L	85.7	80.0 − 120.0	MS	30−APR−21 10:11	210430−1
	Uranium−238	.192	ug/L	.2	ug/L	96.2	80.0 − 120.0	MS	30−APR−21 10:11	210430−1
	Aluminum	50.1	ug/L	50	ug/L	100.2	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Antimony	2.9	ug/L	3	ug/L	96.6	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Arsenic	4.8	ug/L	5	ug/L	95.9	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Barium	4.28	ug/L	4	ug/L	106.9	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Beryllium	.563	ug/L	.5	ug/L	112.6	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Cadmium	.957	ug/L	1	ug/L	95.7	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Calcium	230	ug/L	200	ug/L	115	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Cobalt	1.04	ug/L	1	ug/L	104.3	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Copper	2.1	ug/L	2	ug/L	105.2	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Lead	2.06	ug/L	2	ug/L	103.2	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Magnesium	29.3	ug/L	30	ug/L	97.6	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Manganese	5.13	ug/L	5	ug/L	102.6	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Molybdenum	.963	ug/L	1	ug/L	96.3	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Nickel	2.09	ug/L	2	ug/L	104.5	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Potassium	301	ug/L	300	ug/L	100.4	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Selenium	4.76	ug/L	5	ug/L	95.1	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Silver	.965	ug/L	1	ug/L	96.5	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Sodium	262	ug/L	250	ug/L	104.9	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Thallium	1.79	ug/L	2	ug/L	89.7	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Thorium	2.04	ug/L	2	ug/L	102.2	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Vanadium	20.1	ug/L	20	ug/L	100.3	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Zinc	20.9	ug/L	20	ug/L	104.3	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Calcium	245	ug/L	200	ug/L	122.7	80.0 − 120.0	MS	03−MAY−21 12:27	210503−5
	Manganese	5.19	ug/L	5	ug/L	103.9	80.0 − 120.0	MS	03−MAY−21 12:27	210503−5
	Sodium	273	ug/L	250	ug/L	109.4	80.0 − 120.0	MS	03−MAY−21 12:27	210503−5
	Chromium	10.2	ug/L	10	ug/L	101.6	80.0 − 120.0	MS	05−MAY−21 10:42	210504−6
	Iron	107	ug/L	100	ug/L	106.6	80.0 − 120.0	MS	05−MAY−21 10:42	210504−6

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540069

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	30−APR−21 10:09	210430−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	30−APR−21 10:09	210430−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	30−APR−21 16:53	210430−4
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	30−APR−21 16:53	210430−4
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	30−APR−21 16:53	210430−4
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	30−APR−21 16:53	210430−4
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	30−APR−21 16:53	210430−4
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	30−APR−21 16:53	210430−4
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	30−APR−21 16:53	210430−4
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	30−APR−21 16:53	210430−4
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	30−APR−21 16:53	210430−4
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	30−APR−21 16:53	210430−4
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	30−APR−21 16:53	210430−4
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	30−APR−21 16:53	210430−4
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	30−APR−21 16:53	210430−4
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	03−MAY−21 12:25	210503−5
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	03−MAY−21 12:25	210503−5
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	03−MAY−21 12:25	210503−5
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	05−MAY−21 10:40	210504−6
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	05−MAY−21 10:40	210504−6
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 10:18	210430−1

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540069

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 10:18	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 17:11	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 17:11	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:11	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 17:11	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 17:11	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 17:11	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 17:11	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 17:11	210430−4
	Molybdenum	1.52	+/−1		0.2	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 17:11	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:11	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 17:11	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:11	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:11	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	03−MAY−21 12:35	210503−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 12:35	210503−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 12:35	210503−5
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 10:50	210504−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	05−MAY−21 10:50	210504−6
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 10:45	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 10:45	210430−1

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540069

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 17:22	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 17:22	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:22	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 17:22	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 17:22	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 17:22	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 17:22	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 17:22	210430−4
	Molybdenum	0.703	+/−1	J	0.2	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 17:22	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:22	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 17:22	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Thorium	0.738	+/−2	J	0.7	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:22	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:22	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	03−MAY−21 12:41	210503−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 12:41	210503−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 12:41	210503−5
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 11:05	210504−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	05−MAY−21 11:05	210504−6
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 11:00	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 11:00	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 17:55	210430−4

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540069

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 17:55	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:55	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 17:55	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 17:55	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:55	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 17:55	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:55	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 17:55	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 17:55	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 17:55	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 17:55	210430−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 17:55	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:55	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 17:55	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:55	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:55	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 17:55	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:55	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 17:55	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:55	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:55	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	03−MAY−21 13:00	210503−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 13:00	210503−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 13:00	210503−5
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 11:26	210504−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	05−MAY−21 11:26	210504−6
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 11:16	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 11:16	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 18:31	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 18:31	210430−4

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540069

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 18:31	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 18:31	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 18:31	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 18:31	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 18:31	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 18:31	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 18:31	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 18:31	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 18:31	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 18:31	210430−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 18:31	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 18:31	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 18:31	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 18:31	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 18:31	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 18:31	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 18:31	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 18:31	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 18:31	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 18:31	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 11:49	210504−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	05−MAY−21 11:49	210504−6
CCB05										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 11:35	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 11:35	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 19:11	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 19:11	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 19:11	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 19:11	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 19:11	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 19:11	210430−4

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540069

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 19:11	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 19:11	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 19:11	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 19:11	210430−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 19:11	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 19:11	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 19:11	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 19:11	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 19:11	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 19:11	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 19:11	210430−4

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 540069

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204792934								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.381	ug/L	+/−0.5	BJ	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.759	ug/L	+/−1	BJ	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−4−
Interference Check Sample

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0002	ug/L					30−APR−21 10:13	210430−1
	Uranium−238	0.02	ug/L					30−APR−21 10:13	210430−1
ICSAB01									
	Uranium−235	0.133	ug/L	.145	ug/L	91.7	80.0 − 120.0	30−APR−21 10:15	210430−1
	Uranium−238	19.1	ug/L	19.86	ug/L	96.1	80.0 − 120.0	30−APR−21 10:15	210430−1

METALS
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Interference Check Sample

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	91900	ug/L	100000	ug/L	92	80.0 − 120.0	30−APR−21 17:01	210430−4
	Antimony	0.048	ug/L					30−APR−21 17:01	210430−4
	Arsenic	0.08	ug/L					30−APR−21 17:01	210430−4
	Barium	2.64	ug/L					30−APR−21 17:01	210430−4
	Beryllium	0.004	ug/L					30−APR−21 17:01	210430−4
	Cadmium	0.763	ug/L					30−APR−21 17:01	210430−4
	Calcium	94800	ug/L	100000	ug/L	94.8	80.0 − 120.0	30−APR−21 17:01	210430−4
	Cobalt	0.485	ug/L					30−APR−21 17:01	210430−4
	Copper	0.164	ug/L					30−APR−21 17:01	210430−4
	Lead	0.184	ug/L					30−APR−21 17:01	210430−4
	Magnesium	89800	ug/L	100000	ug/L	89.8	80.0 − 120.0	30−APR−21 17:01	210430−4
	Manganese	6.7	ug/L					30−APR−21 17:01	210430−4
	Molybdenum	2060	ug/L	2000	ug/L	103	80.0 − 120.0	30−APR−21 17:01	210430−4
	Nickel	0.426	ug/L					30−APR−21 17:01	210430−4
	Potassium	92900	ug/L	100000	ug/L	92.9	80.0 − 120.0	30−APR−21 17:01	210430−4
	Selenium	0.281	ug/L					30−APR−21 17:01	210430−4
	Silver	0.121	ug/L					30−APR−21 17:01	210430−4
	Sodium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	30−APR−21 17:01	210430−4
	Thallium	−0.077	ug/L					30−APR−21 17:01	210430−4
	Thorium	1.63	ug/L					30−APR−21 17:01	210430−4
	Vanadium	0.004	ug/L					30−APR−21 17:01	210430−4
	Zinc	2.38	ug/L					30−APR−21 17:01	210430−4
ICSAB01									
	Aluminum	91700	ug/L	100000	ug/L	91.7	80.0 − 120.0	30−APR−21 17:04	210430−4
	Antimony	19.8	ug/L	20	ug/L	99.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Arsenic	20.9	ug/L	20	ug/L	104	80.0 − 120.0	30−APR−21 17:04	210430−4
	Barium	22.2	ug/L	22.35	ug/L	99.2	80.0 − 120.0	30−APR−21 17:04	210430−4
	Beryllium	18.8	ug/L	20	ug/L	94.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Cadmium	20.0	ug/L	20.72	ug/L	96.5	80.0 − 120.0	30−APR−21 17:04	210430−4
	Calcium	94000	ug/L	100000	ug/L	94	80.0 − 120.0	30−APR−21 17:04	210430−4

METALS
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Interference Check Sample

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cobalt	19.9	ug/L	20.65	ug/L	96.4	80.0 − 120.0	30−APR−21 17:04	210430−4
	Copper	17.8	ug/L	20	ug/L	89	80.0 − 120.0	30−APR−21 17:04	210430−4
	Lead	18.8	ug/L	20	ug/L	94.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Magnesium	90400	ug/L	100000	ug/L	90.4	80.0 − 120.0	30−APR−21 17:04	210430−4
	Manganese	25.8	ug/L	25.72	ug/L	100	80.0 − 120.0	30−APR−21 17:04	210430−4
	Molybdenum	2060	ug/L	2000	ug/L	103	80.0 − 120.0	30−APR−21 17:04	210430−4
	Nickel	18.8	ug/L	20	ug/L	93.8	80.0 − 120.0	30−APR−21 17:04	210430−4
	Potassium	93700	ug/L	100000	ug/L	93.7	80.0 − 120.0	30−APR−21 17:04	210430−4
	Selenium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	30−APR−21 17:04	210430−4
	Silver	18.4	ug/L	20	ug/L	92.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Sodium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	30−APR−21 17:04	210430−4
	Thallium	17.9	ug/L	20	ug/L	89.3	80.0 − 120.0	30−APR−21 17:04	210430−4
	Thorium	21.2	ug/L	20	ug/L	106	80.0 − 120.0	30−APR−21 17:04	210430−4
	Vanadium	20.1	ug/L	20	ug/L	100	80.0 − 120.0	30−APR−21 17:04	210430−4
	Zinc	20.9	ug/L	20	ug/L	104	80.0 − 120.0	30−APR−21 17:04	210430−4

METALS
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Interference Check Sample

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	96400	ug/L	100000	ug/L	96.4	80.0 − 120.0	03−MAY−21 12:29	210503−5
	Manganese	5.84	ug/L					03−MAY−21 12:29	210503−5
	Sodium	99200	ug/L	100000	ug/L	99.2	80.0 − 120.0	03−MAY−21 12:29	210503−5
ICSAB01									
	Calcium	93600	ug/L	100000	ug/L	93.6	80.0 − 120.0	03−MAY−21 12:31	210503−5
	Manganese	25.4	ug/L	25.72	ug/L	98.9	80.0 − 120.0	03−MAY−21 12:31	210503−5
	Sodium	99100	ug/L	100000	ug/L	99.1	80.0 − 120.0	03−MAY−21 12:31	210503−5

METALS
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Interference Check Sample

SDG No: 540069

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Chromium	0.812	ug/L					05−MAY−21 10:44	210504−6
	Iron	82800	ug/L	100000	ug/L	82.8	80.0 − 120.0	05−MAY−21 10:44	210504−6
ICSAB01									
	Chromium	20.6	ug/L	20	ug/L	103	80.0 − 120.0	05−MAY−21 10:46	210504−6
	Iron	83700	ug/L	100000	ug/L	83.7	80.0 − 120.0	05−MAY−21 10:46	210504−6

METALS
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Matrix Spike Summary

SDG NO. 540069 **Client ID** GZW−9−1−04052021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540069001 **Spike ID:** 1204792936

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.363		0.0100	U	0.360	101		MS
Uranium−238	ug/L	75−125	50.5		0.0670	U	49.6	102		MS
Vanadium	ug/L	75−125	53.2		3.30	U	50.0	104		MS
Zinc	ug/L	75−125	52.9		3.30	U	50.0	102		MS
Silver	ug/L	75−125	53.4		0.300	U	50.0	107		MS
Sodium	ug/L		41600		38800		2000	138	N/A	MS
Thallium	ug/L	75−125	49.5		0.600	U	50.0	99		MS
Thorium	ug/L	75−125	53.7		0.700	U	50.0	107		MS
Aluminum	ug/L	75−125	2130		19.3	U	2000	106		MS
Antimony	ug/L	75−125	53.7		1.00	U	50.0	107		MS
Arsenic	ug/L	75−125	51.9		2.00	U	50.0	102		MS
Barium	ug/L	75−125	67.2		15.4		50.0	104		MS
Beryllium	ug/L	75−125	58.3		0.200	U	50.0	117		MS
Cadmium	ug/L	75−125	54.0		0.300	U	50.0	108		MS
Calcium	ug/L		16700		14500		2000	110	N/A	MS
Chromium	ug/L	75−125	58.2		3.00	U	50.0	116		MS
Cobalt	ug/L	75−125	52.3		0.300	U	50.0	104		MS
Copper	ug/L	75−125	52.0		0.300	U	50.0	104		MS
Iron	ug/L	75−125	2340		38.3	J	2000	115		MS
Lead	ug/L	75−125	52.1		0.500	U	50.0	104		MS
Magnesium	ug/L	75−125	5330		3170		2000	108		MS
Manganese	ug/L	75−125	53.2		1.80	J	50.0	103		MS

METALS
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Matrix Spike Summary

SDG NO. 540069 **Client ID** GZW−9−1−04052021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540069001 **Spike ID:** 1204792936

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Molybdenum	ug/L	75−125	55.6		0.227	J	50.0	111		MS
Nickel	ug/L	75−125	51.8		0.600	U	50.0	103		MS
Potassium	ug/L	75−125	4340		2200		2000	107		MS
Selenium	ug/L	75−125	51.3		2.00	U	50.0	102		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 540069 **Client ID** GZW−9−1−04052021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540069001 **Spike ID:** 1204792937

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Antimony	ug/L	75−125	54.7		1.00	U	50.0	109		MS
Arsenic	ug/L	75−125	52.6		2.00	U	50.0	103		MS
Barium	ug/L	75−125	68.2		15.4		50.0	106		MS
Beryllium	ug/L	75−125	59.2		0.200	U	50.0	118		MS
Cadmium	ug/L	75−125	54.9		0.300	U	50.0	110		MS
Aluminum	ug/L	75−125	2150		19.3	U	2000	107		MS
Calcium	ug/L		16800		14500		2000	115	N/A	MS
Chromium	ug/L	75−125	60.0		3.00	U	50.0	119		MS
Cobalt	ug/L	75−125	53.4		0.300	U	50.0	106		MS
Copper	ug/L	75−125	52.4		0.300	U	50.0	104		MS
Iron	ug/L	75−125	2390		38.3	J	2000	118		MS
Lead	ug/L	75−125	53.3		0.500	U	50.0	106		MS
Magnesium	ug/L	75−125	5320		3170		2000	107		MS
Manganese	ug/L	75−125	53.9		1.80	J	50.0	104		MS
Molybdenum	ug/L	75−125	56.0		0.227	J	50.0	112		MS
Nickel	ug/L	75−125	52.7		0.600	U	50.0	104		MS
Potassium	ug/L	75−125	4380		2200		2000	109		MS
Selenium	ug/L	75−125	52.3		2.00	U	50.0	104		MS
Silver	ug/L	75−125	53.6		0.300	U	50.0	107		MS
Sodium	ug/L		41300		38800		2000	123	N/A	MS
Thallium	ug/L	75−125	50.6		0.600	U	50.0	101		MS
Thorium	ug/L	75−125	54.6		0.700	U	50.0	108		MS

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Matrix Spike Duplicate Summary

SDG NO.	540069	**Client ID**	GZW−9−1−04052021SD
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	540069001	**Spike ID:**	1204792937

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.374		0.0100	U	0.360	104		MS
Uranium−238	ug/L	75−125	51.3		0.0670	U	49.6	103		MS
Vanadium	ug/L	75−125	54.5		3.30	U	50.0	107		MS
Zinc	ug/L	75−125	53.9		3.30	U	50.0	104		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 540069 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** GZW−9−1−04052021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792936 **Duplicate ID:** 1204792937 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2130		2150		1.04		MS
Antimony	ug/L	+/−20	53.7		54.7		1.96		MS
Arsenic	ug/L	+/−20	51.9		52.6		1.45		MS
Barium	ug/L	+/−20	67.2		68.2		1.53		MS
Beryllium	ug/L	+/−20	58.3		59.2		1.5		MS
Cadmium	ug/L	+/−20	54.0		54.9		1.63		MS
Calcium	ug/L	+/−20	16700		16800		.673		MS
Chromium	ug/L	+/−20	58.2		60.0		3.03		MS
Cobalt	ug/L	+/−20	52.3		53.4		2.04		MS
Copper	ug/L	+/−20	52.0		52.4		.818		MS
Iron	ug/L	+/−20	2340		2390		2.22		MS
Lead	ug/L	+/−20	52.1		53.3		2.11		MS
Magnesium	ug/L	+/−20	5330		5320		.23		MS
Manganese	ug/L	+/−20	53.2		53.9		1.41		MS
Molybdenum	ug/L	+/−20	55.6		56.0		.666		MS
Nickel	ug/L	+/−20	51.8		52.7		1.67		MS
Potassium	ug/L	+/−20	4340		4380		1.04		MS
Selenium	ug/L	+/−20	51.3		52.3		1.88		MS
Silver	ug/L	+/−20	53.4		53.6		.361		MS
Sodium	ug/L	+/−20	41600		41300		.73		MS
Thallium	ug/L	+/−20	49.5		50.6		2.22		MS
Thorium	ug/L	+/−20	53.7		54.6		1.65		MS
Uranium−235	ug/L	+/−20	0.363		0.374		2.87		MS
Uranium−238	ug/L	+/−20	50.5		51.3		1.58		MS
Vanadium	ug/L	+/−20	53.2		54.5		2.37		MS
Zinc	ug/L	+/−20	52.9		53.9		1.73		MS

Metals
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Duplicate Sample Summary

SDG No.: 540069 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** GZW−9−1−04052021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792936 **Duplicate ID:** 1204792937 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

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Laboratory Control Sample Summary

SDG NO. 540069

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204792935								
	Aluminum	ug/L	2000	2070		104	80−120	MS
	Antimony	ug/L	50.0	51.6		103	80−120	MS
	Arsenic	ug/L	50.0	49.9		99.7	80−120	MS
	Barium	ug/L	50.0	51.6		103	80−120	MS
	Beryllium	ug/L	50.0	55.9		112	80−120	MS
	Cadmium	ug/L	50.0	52.3		105	80−120	MS
	Calcium	ug/L	2000	2190		109	80−120	MS
	Chromium	ug/L	50.0	51.3		103	80−120	MS
	Cobalt	ug/L	50.0	52.2		104	80−120	MS
	Copper	ug/L	50.0	53.4		107	80−120	MS
	Iron	ug/L	2000	2080		104	80−120	MS
	Lead	ug/L	50.0	52.3		105	80−120	MS
	Magnesium	ug/L	2000	2120		106	80−120	MS
	Manganese	ug/L	50.0	54.1		108	80−120	MS
	Molybdenum	ug/L	50.0	54.9		110	80−120	MS
	Nickel	ug/L	50.0	53.7		107	80−120	MS
	Potassium	ug/L	2000	2080		104	80−120	MS
	Selenium	ug/L	50.0	49.9		99.7	80−120	MS
	Silver	ug/L	50.0	53.3		107	80−120	MS
	Sodium	ug/L	2000	2220		111	80−120	MS
	Thallium	ug/L	50.0	49.5		99.1	80−120	MS
	Thorium	ug/L	50.0	53.0		106	80−120	MS
	Uranium−235	ug/L	0.360	0.360		100	80−120	MS
	Vanadium	ug/L	50.0	53.5		107	80−120	MS
	Zinc	ug/L	50.0	51.2		102	80−120	MS
	Uranium−238	ug/L	49.6	49.3		99.3	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 540069 **Client ID** GZW−9−1−04052021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540069001 **Serial Dilution ID:** 1204792938

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	15.4		14.4	J	6.499			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	14500		14100		2.524		20	MS
Chromium	3	U	15	U				MS
Cobalt	.3	U	1.5	U				MS
Copper	.3	U	1.5	U				MS
Iron	38.3	J	165	U	22.12			MS
Lead	.5	U	2.5	U				MS
Magnesium	3170		3100		2.227		20	MS
Manganese	1.8	J	5	U	14.722			MS
Molybdenum	.227	J	1	U	148.899			MS
Nickel	.6	U	3	U				MS
Potassium	2200		2140		2.529			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	38800		37700		2.863		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.067	U	.335	U				MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	16.5	U				MS

METALS
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Serial Dilution Sample Summary

SDG NO. 540069 **Client ID** GZW-9-1-04052021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540069001 **Serial Dilution ID:** 1204792938

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

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SAMPLE PREPARATION SUMMARY

SDG No: 540069 **Method Type**: MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2113877							
1204792934	MB for batch 2113877	MB	G	12−APR−21	50mL	50mL	
1204792935	LCS for batch 2113877	LCS	G	12−APR−21	50mL	50mL	
1204792936	GZW−9−1−04052021S	MS	G	12−APR−21	50mL	50mL	
1204792937	GZW−9−1−04052021SD	MSD	G	12−APR−21	50mL	50mL	
540069001	GZW−9−1−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069002	GZW−9−1−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069003	MW−S36−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069004	MW−S36−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069005	MW−S07−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069006	MW−S07−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069007	HA20−CMT−3B(OW)−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069008	HA20−CMT−3B(OW)−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069009	MW−SD29−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069010	MW−SD29−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069011	MW−SD36−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069012	MW−SD36−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069013	MW−SD60−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069014	MW−SD60−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069015	MW−BS15−04052021	SAMPLE	G	12−APR−21	50mL	50mL	

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METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 540069 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
540069016	MW−BS15−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069017	MW−BM15−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540069018	MW−BM15−04052021	SAMPLE	G	12−APR−21	50mL	50mL	

SW846

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540069

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	10:02:42																							X	X		
S10	1	10:04:28																							X	X		
S100	1	10:06:15																							X	X		
ICV01	1	10:08:01																							X	X		
ICB01	1	10:09:49																							X	X		
CRDL01	1	10:11:36																							X	X		
ICSA01	1	10:13:24																							X	X		
ICSAB01	1	10:15:13																							X	X		
CCV01	1	10:17:01																							X	X		
CCB01	1	10:18:48																							X	X		
1204792934	1	10:31:34																							X	X		
1204792935	1	10:33:21																							X	X		
540069001	1	10:35:07																							X	X		
1204792936	1	10:36:54																							X	X		
1204792937	1	10:38:41																							X	X		
ZZZZZZ	1	10:40:28																										
1204792938	5	10:42:15																							X	X		
CCV02	1	10:44:03																							X	X		
CCB02	1	10:45:51																							X	X		
540069002	1	10:47:39																							X	X		
540069003	1	10:49:26																							X	X		
540069004	1	10:51:13																							X	X		
540069005	1	10:53:00																							X	X		
540069006	1	10:54:46																							X	X		
540069007	1	10:56:33																							X	X		
CCV03	1	10:58:20																							X	X		
CCB03	1	11:00:08																							X	X		
540069008	1	11:01:55																							X	X		
540069009	1	11:03:42																							X	X		
540069010	1	11:05:29																							X	X		
540069011	1	11:07:17																							X	X		
540069012	1	11:09:04																							X	X		
540069013	1	11:10:51																							X			
ZZZZZZ	2	11:12:38																										
CCV04	1	11:14:26																							X	X		
CCB04	1	11:16:13																							X	X		
540069014	1	11:18:01																							X			
540069013	2	11:22:51																								X		
540069014	2	11:24:37																								X		
540069015	1	11:26:25																							X	X		
540069016	1	11:28:11																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540069

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
540069017	1	11:29:58																							X	X		
540069018	1	11:31:45																							X	X		
CCV05	1	11:33:32																							X	X		
CCB05	1	11:35:20																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540069

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	16:39:25	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	16:43:02	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	16:46:38	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	16:50:15	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	16:53:51	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	16:57:27	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	17:01:03	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	17:04:39	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	17:08:15	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	17:11:51	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	17:15:28	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	17:19:04	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	17:22:41	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204792934	1	17:26:17	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204792935	1	17:29:54	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069001	1	17:33:30	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204792936	1	17:37:07	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204792937	1	17:40:43	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	17:44:20																										
1204792938	5	17:47:57	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV03	1	17:51:34	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	17:55:10	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069002	1	17:58:47	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069003	1	18:02:24	X	X	X	X	X	X	X		X	X		X	X		X	X	X	X	X		X	X			X	X
540069004	1	18:06:00	X	X	X	X	X	X	X		X	X		X	X		X	X	X	X	X		X	X			X	X
540069005	1	18:09:37	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069006	1	18:13:13	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069007	1	18:16:50	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X		X	X			X	X
540069008	1	18:20:27	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X		X	X			X	X
540069009	1	18:24:03	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	18:27:41	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	18:31:18	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069010	1	18:34:56	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069011	1	18:38:33	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069012	1	18:42:09	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069013	1	18:45:46	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069014	1	18:49:23	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069015	1	18:53:00	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X		X	X			X	X
540069016	1	18:56:36	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X		X	X			X	X
540069017	1	19:00:13	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540069018	1	19:03:50	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540069

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCV05	1	19:07:28	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	19:11:05	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540069

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 03-MAY-21 **End Date:** 03-MAY-21 **Data File:** 210503-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	12:18:02							X							X						X						
S10	1	12:19:59							X							X						X						
S100	1	12:21:55							X							X						X						
ICV01	1	12:23:51							X							X						X						
ICB01	1	12:25:48							X							X						X						
CRDL01	1	12:27:45							X							X						X						
ICSA01	1	12:29:41							X							X						X						
ICSAB01	1	12:31:38							X							X						X						
CCV01	1	12:33:35							X							X						X						
CCB01	1	12:35:32							X							X						X						
LR01	1	12:37:29							X							X						X						
CCV02	1	12:39:26							X							X						X						
CCB02	1	12:41:23							X							X						X						
ZZZZZZ	1	12:43:20																										
ZZZZZZ	1	12:45:17																										
540069003	10	12:47:14														X						X						
540069004	10	12:49:10														X						X						
540069007	10	12:51:07																				X						
540069008	10	12:53:04																				X						
540069015	10	12:55:00							X													X						
540069016	10	12:56:57							X													X						
CCV03	1	12:58:54							X							X						X						
CCB03	1	13:00:51							X							X						X						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540069

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 05-MAY-21 **End Date:** 05-MAY-21 **Data File:** 210504-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	10:33:07								X			X															
S10	1	10:35:01								X			X															
S100	1	10:36:56								X			X															
ICV01	1	10:38:51								X			X															
ICB01	1	10:40:46								X			X															
CRDL01	1	10:42:41								X			X															
ICSA01	1	10:44:36								X			X															
ICSAB01	1	10:46:31								X			X															
CCV01	1	10:48:26								X			X															
CCB01	1	10:50:21								X			X															
1204792934	1	10:52:16								X			X															
1204792935	1	10:54:11								X			X															
540069001	1	10:56:06								X			X															
1204792936	1	10:58:01								X			X															
1204792937	1	10:59:56								X			X															
1204792938	5	11:01:51								X			X															
CCV02	1	11:03:47								X			X															
CCB02	1	11:05:42								X			X															
540069002	1	11:07:37								X			X															
540069003	1	11:09:32								X			X															
540069004	1	11:11:27								X			X															
540069005	1	11:13:22								X			X															
540069006	1	11:15:17								X			X															
540069007	1	11:17:12								X			X															
540069008	1	11:19:07								X			X															
540069009	1	11:21:02								X			X															
540069010	1	11:22:56								X			X															
CCV03	1	11:24:52								X			X															
CCB03	1	11:26:48								X			X															
540069011	1	11:28:43								X																		
540069011	10	11:30:39											X															
540069012	1	11:32:35								X																		
540069012	10	11:34:31											X															
540069013	1	11:36:27								X			X															
540069014	1	11:38:22								X			X															
540069015	1	11:40:17								X			X															
540069016	1	11:42:11								X			X															
540069017	1	11:44:06								X			X															
540069018	1	11:46:01								X			X															
CCV04	1	11:47:58								X			X															
CCB04	1	11:49:53								X			X															

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540069

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
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Instrument Detection Limits

SDG NO. 540069

Contract: DMAX00801 **Lab Code:** **GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 540069

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Zinc	1000	2500	ug/L	01−AUG−17
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: 2113877
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204792935	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204792935	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204792936	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204792936	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204792937	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204792937	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204792934 MB	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792935 LCS	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069001	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792938 SDILT (540069001)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792936 MS (540069001)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792937 MSD (540069001)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069002	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069003	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069004	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069005	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069006	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069007	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069008	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069009	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069010	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069011	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069012	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069013	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069014	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069015	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069016	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069017	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540069018	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3265774	HYDROCHLORIC ACID	2.5 mL
3279375	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 90 C
Temperature within limits (Y/N)?: y
Thermometer ID: 1120212072
Hot Block ID: 11
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 05, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 540204

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 09, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04062021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540204

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540204

May 05, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 09, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
540204001	HA20-CMT3T(OW)-04052021
540204002	HA20-CMT3T(OW)-04052021
540204003	GZW-9-2-04052021
540204004	GZW-9-2-04052021
540204005	MW-S15-04052021
540204006	MW-S15-04052021
540204007	MW-S60-04052021
540204008	MW-S60-04052021
540204009	EQ Blank1-04062021
540204010	EQ Blank1-04062021
540204011	MW-S29-04062021
540204012	MW-S29-04062021
540204013	HA20-CMT-6(OW)-04062021
540204014	HA20-CMT-6(OW)-04062021
540204015	MW-8A-04062021
540204016	MW-8A-04062021
540204017	MW-BS36-04062021
540204018	MW-BS36-04062021
540204019	HA20-CMT-5(OW)-04062021
540204020	HA20-CMT-5(OW)-04062021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page: 1 of 3
Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]: 04062021
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

540204

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

GEL Work Order Number: *GEL Project Manager: Zach Worsham*

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS)	Dissolved Metals (6020A ICP-MS)	U-235/U-238 plus Total U Calc.								Comments Note: extra sample is required for sample specific QC
<-- Preservative Type (6)									NI	NI	NI								
HA20-CMT3T(OW)-04052021	4/5/2021	16:45	N	Y	GW	U238		2	X	X	X								Total and Diss. ICP-MS List:
GZW-9-2-04052021	4/5/2021	16:50	N	Y	GW	U238		2	X	X	X								Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
MW-S15-04052021	4/5/2021	17:00	N	Y	GW	U238		2	X	X	X								
MW-S60-04052021	4/5/2021	17:12	N	Y	GW	U238		2	X	X	X								
EQ Blank1-04062021	4/6/2021	9:00	N	Y	GW	U238		2	X	X	X								
MW-S29-04062021	4/6/2021	9:45	N	Y	GW	U238		2	X	X	X								
HA20-CMT-6(OW)-04062021	4/6/2021	10:25	N	Y	GW	U238		2	X	X	X								
MW-8A-04062021	4/6/2021	10:40	N	Y	GW	U238		2	X	X	X								
MW-BS36-04062021	4/6/2021	10:40	N	Y	GW	U238		2	X	X	X								
HA20-CMT-5(OW)-04062021	4/6/2021	10:45	N	Y	GW	U238		2	X	X	X								

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/7/21	0830	1	[signature]	4/7/21	0830
2	[signature]	4/7/21	1500	2	[signature]	4 9 21	1010
3				3			

TAT Requested: Normal: X Rush: _____ Specify: ________

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** _____*°C*

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via NaI. [initials]

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 540204
Received By: S L BOONE	Date Received: APRIL 9, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7733 7887 5412 5°c 7733 7887 5136 4°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:________
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7733 7887 5397 4°c 7733 7887 5228 3°c

PM (or PMA) review: Initials CD Date 4/12/21 Page 1 of 1

GL-CHL-SR-001 Rev 7

Work Order Containers

Sample ID: 540204001
Client Sample ID: HA20−CMT3T(OW)−04052021
Description: Ground Water

Label: 540204001.01 **Type:** Plastic 500 ml **Preservative:** Nitric pH<2

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204001.01.01 **Type:** New Undefined

29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540204002
Client Sample ID: HA20−CMT3T(OW)−04052021
Description: Dissolved Ground Water

Label: 540204002.01 **Type:** Plastic 500 ml **Preservative:** Nitric pH<2

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204002.01.01 **Type:** New Undefined

29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540204003
Client Sample ID: GZW−9−2−04052021
Description: Ground Water

Label: 540204003.01 **Type:** Plastic 500 ml **Preservative:** Nitric pH<2

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to

Work Order Containers

Sample ID: **540204003**
Client Sample ID: **GZW−9−2−04052021**
Description: **Ground Water**

Label: 540204003.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204003.01.01 | **Type: New Undefined**

29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204004**
Client Sample ID: **GZW−9−2−04052021**
Description: **Dissolved Ground Water**

Label: 540204004.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204004.01.01 | **Type: New Undefined**

29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204005**
Client Sample ID: **MW−S15−04052021**
Description: **Ground Water**

Label: 540204005.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540204005**
Client Sample ID: **MW−S15−04052021**
Description: **Ground Water**

Label: 540204005.01.01	**Type: New Undefined**	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204006**
Client Sample ID: **MW−S15−04052021**
Description: **Dissolved Ground Water**

Label: 540204006.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540204006.01.01	**Type: New Undefined**	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204007**
Client Sample ID: **MW−S60−04052021**
Description: **Ground Water**

Label: 540204007.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
Label: 540204007.01.01	**Type: New Undefined**	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540204008**
Client Sample ID: **MW−S60−04052021**
Description: **Dissolved Ground Water**

Label: 540204008.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204008.01.01 | **Type: New Undefined**

29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204009**
Client Sample ID: **EQ Blank1−04062021**
Description: **Ground Water**

Label: 540204009.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204009.01.01 | **Type: New Undefined**

29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204010**
Client Sample ID: **EQ Blank1−04062021**
Description: **Dissolved Ground Water**

Label: 540204010.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to

Work Order Containers

Sample ID: **540204010**
Client Sample ID: **EQ Blank1−04062021**
Description: **Dissolved Ground Water**

Label: 540204010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples

Label: 540204010.01.01	**Type: New Undefined**	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204011**
Client Sample ID: **MW−S29−04062021**
Description: **Ground Water**

Label: 540204011.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204011.01.01	**Type: New Undefined**	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204012**
Client Sample ID: **MW−S29−04062021**
Description: **Dissolved Ground Water**

Label: 540204012.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204012.01.01	**Type: New Undefined**	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540204013**
Client Sample ID: **HA20−CMT−6(OW)−04062021**
Description: **Ground Water**

Label: 540204013.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204013.01.01 **Type: New Undefined**

29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204014**
Client Sample ID: **HA20−CMT−6(OW)−04062021**
Description: **Dissolved Ground Water**

Label: 540204014.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204014.01.01 **Type: New Undefined**

29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204015**
Client Sample ID: **MW−8A−04062021**
Description: **Ground Water**

Label: 540204015.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to

Work Order Containers

Sample ID: 540204015
Client Sample ID: MW−8A−04062021
Description: Ground Water

Label: 540204015.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204015.01.01	Type: New Undefined	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540204016
Client Sample ID: MW−8A−04062021
Description: Dissolved Ground Water

Label: 540204016.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204016.01.01	Type: New Undefined	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540204017
Client Sample ID: MW−BS36−04062021
Description: Ground Water

Label: 540204017.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540204017**
Client Sample ID: **MW−BS36−04062021**
Description: **Ground Water**

Label: 540204017.01.01	**Type: New Undefined**	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204018**
Client Sample ID: **MW−BS36−04062021**
Description: **Dissolved Ground Water**

Label: 540204018.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204018.01.01	**Type: New Undefined**	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540204019**
Client Sample ID: **HA20−CMT−5(OW)−04062021**
Description: **Ground Water**

Label: 540204019.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204019.01.01	**Type: New Undefined**	
29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540204020**
Client Sample ID: **HA20−CMT−5(OW)−04062021**
Description: **Dissolved Ground Water**

Label: 540204020.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 20:08:49	Hannah Hatherly	Transfered custody to batch 2113880
09−APR−21 20:08:49	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 22:16:58	Hannah Hatherly	Changed batch_id from 2113880 to
09−APR−21 22:16:58	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 11:16:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540204020.01.01 **Type: New Undefined**

29−APR−21 16:08:54	Paul Boyd	Transfered custody to batch 2113881
29−APR−21 16:08:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 05 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 540204

Product: Determination of Metals by ICP-MS
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 34
Analytical Batch: 2113881

Product: Inorganic Calculations
Analytical Method: SW846 6020
Analytical Procedure: GL-GC-E-107 REV# 10
Analytical Batch: 2123947

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2113880

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
540204001	HA20-CMT3T(OW)-04052021
540204002	HA20-CMT3T(OW)-04052021
540204003	GZW-9-2-04052021
540204004	GZW-9-2-04052021
540204005	MW-S15-04052021
540204006	MW-S15-04052021
540204007	MW-S60-04052021
540204008	MW-S60-04052021
540204009	EQ Blank1-04062021
540204010	EQ Blank1-04062021
540204011	MW-S29-04062021
540204012	MW-S29-04062021
540204013	HA20-CMT-6(OW)-04062021
540204014	HA20-CMT-6(OW)-04062021
540204015	MW-8A-04062021
540204016	MW-8A-04062021
540204017	MW-BS36-04062021
540204018	MW-BS36-04062021
540204019	HA20-CMT-5(OW)-04062021
540204020	HA20-CMT-5(OW)-04062021
1204792939	Method Blank (MB)**ICP-MS**
1204792940	Laboratory Control Sample (LCS)
1204792943	540204001(HA20-CMT3T(OW)-04052021L) Serial Dilution (SD)
1204792941	540204001(HA20-CMT3T(OW)-04052021S) Matrix Spike (MS)
1204792942	540204001(HA20-CMT3T(OW)-04052021SD) Matrix Spike Duplicate (MSD)

Samples 540204001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements
The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of the calcium. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. 540204001 (HA20-CMT3T(OW)-04052021)-ICP-MS.

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 540204001 (HA20-CMT3T(OW)-04052021), 540204002 (HA20-CMT3T(OW)-04052021), 540204003 (GZW-9-2-04052021), 540204004 (GZW-9-2-04052021), 540204005 (MW-S15-04052021), 540204006 (MW-S15-04052021), 540204015 (MW-8A-04062021), 540204016 (MW-8A-04062021), 540204017 (MW-BS36-04062021) and 540204018 (MW-BS36-04062021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	540204									
	001	**002**	**003**	**004**	**005**	**006**	**015**	**016**	**017**	**018**
Calcium	10X	10X	1X	1X	1X	1X	1X	1X	1X	1X
Magnesium	10X	10X	1X	1X	1X	1X	1X	1X	1X	1X
Manganese	10X	10X	10X	10X	10X	10X	1X	1X	1X	1X
Sodium	10X	10X	1X	1X	10X	10X	1X	1X	10X	10X
Uranium-238	1X	1X	1X	1X	1X	1X	5X	5X	1X	1X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 540204 GEL Work Order: 540204

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
** Indicates analyte is a surrogate compound.
J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name:** **Jamie Johnson**

Date: **06 MAY 2021** **Title:** **Group Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204001 **BASIS:** As Received **DATE COLLECTED** 05-APR-21

CLIENT ID: HA20-CMT3T(OW)-040520 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	23.1	ug/L	J	19.3	50.0	50.0	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-39-3	Barium	216	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-70-2	Calcium	210000	ug/L		800	2000	2000	10	MS	PRB	05/03/21 13:06	210503-6	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-48-4	Cobalt	0.464	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-50-8	Copper	0.607	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7439-89-6	Iron	48.2	ug/L	J	33.0	100	100	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7439-95-4	Magnesium	58800	ug/L		100	300	300	10	MS	PRB	05/03/21 13:06	210503-6	2113881
7439-96-5	Manganese	1350	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 13:06	210503-6	2113881
7439-98-7	Molybdenum	21.6	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-02-0	Nickel	0.879	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-09-7	Potassium	18000	ug/L		80.0	300	300	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-23-5	Sodium	112000	ug/L		800	2500	2500	10	MS	PRB	05/03/21 13:06	210503-6	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-61-1	Total Uranium	4.11	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0292	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:40	210430-1	2113881
7440-61-1	Uranium-238	4.08	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:40	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:21	210430-4	2113881
7440-66-6	Zinc	3.49	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:21	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204002 **BASIS:** Filtered **DATE COLLECTED** 05−APR−21

CLIENT ID: HA20−CMT3T(OW)−040520 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	839	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−39−3	Barium	245	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−70−2	Calcium	210000	ug/L		800	2000	2000	10	MS	PRB	05/03/21 13:18	210503−6	2113881
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−48−4	Cobalt	1.13	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−50−8	Copper	2.89	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7439−89−6	Iron	1130	ug/L		33.0	100	100	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7439−92−1	Lead	1.69	ug/L	J	0.500	2.00	2.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7439−95−4	Magnesium	59500	ug/L		100	300	300	10	MS	PRB	05/03/21 13:18	210503−6	2113881
7439−96−5	Manganese	1380	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 13:18	210503−6	2113881
7439−98−7	Molybdenum	16.3	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−02−0	Nickel	1.77	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−09−7	Potassium	18200	ug/L		80.0	300	300	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−23−5	Sodium	111000	ug/L		800	2500	2500	10	MS	PRB	05/03/21 13:18	210503−6	2113881
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−29−1	Thorium	0.807	ug/L	J	0.700	2.00	2.00	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−61−1	Total Uranium	4.52	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0304	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:53	210430−1	2113881
7440−61−1	Uranium−238	4.49	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:53	210430−1	2113881
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:47	210430−4	2113881
7440−66−6	Zinc	7.60	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:47	210430−4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204003 **BASIS:** As Received **DATE COLLECTED** 05−APR−21

CLIENT ID: GZW−9−2−04052021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	27.1	ug/L	J	19.3	50.0	50.0	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−39−3	Barium	17.0	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−70−2	Calcium	20000	ug/L		80.0	200	200	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−48−4	Cobalt	4.18	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−50−8	Copper	0.717	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7439−89−6	Iron	552	ug/L		33.0	100	100	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7439−95−4	Magnesium	5360	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7439−96−5	Manganese	1330	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 13:20	210503−6	2113881
7439−98−7	Molybdenum	0.379	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−02−0	Nickel	2.66	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−09−7	Potassium	3090	ug/L		80.0	300	300	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−23−5	Sodium	11000	ug/L		80.0	250	250	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−61−1	Total Uranium	0.0820	ug/L	J	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:54	210430−1	2113881
7440−61−1	Uranium−238	0.0820	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:54	210430−1	2113881
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:50	210430−4	2113881
7440−66−6	Zinc	4.24	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:50	210430−4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204004 **BASIS:** Filtered **DATE COLLECTED** 05-APR-21

CLIENT ID: GZW-9-2-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-39-3	Barium	16.8	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-70-2	Calcium	20400	ug/L		80.0	200	200	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-48-4	Cobalt	4.15	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-50-8	Copper	0.409	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7439-89-6	Iron	436	ug/L		33.0	100	100	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7439-95-4	Magnesium	5480	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7439-96-5	Manganese	1300	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 13:22	210503-6	2113881
7439-98-7	Molybdenum	0.333	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-02-0	Nickel	2.79	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-09-7	Potassium	3130	ug/L		80.0	300	300	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-23-5	Sodium	11300	ug/L		80.0	250	250	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:56	210430-1	2113881
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:56	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:54	210430-4	2113881
7440-66-6	Zinc	3.96	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:54	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204005 **BASIS:** As Received **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-S15-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	508	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-39-3	Barium	301	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-70-2	Calcium	33000	ug/L		80.0	200	200	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-48-4	Cobalt	8.58	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-50-8	Copper	0.727	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7439-89-6	Iron	1200	ug/L		33.0	100	100	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7439-92-1	Lead	0.521	ug/L	J	0.500	2.00	2.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7439-95-4	Magnesium	7950	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7439-96-5	Manganese	1380	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 13:24	210503-6	2113881
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-02-0	Nickel	6.61	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-09-7	Potassium	3980	ug/L		80.0	300	300	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-23-5	Sodium	323000	ug/L		800	2500	2500	10	MS	PRB	05/03/21 13:24	210503-6	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 11:58	210430-1	2113881
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 11:58	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:58	210430-4	2113881
7440-66-6	Zinc	13.6	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 19:58	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204006 **BASIS:** Filtered **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-S15-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	480	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-39-3	Barium	303	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-70-2	Calcium	33000	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-48-4	Cobalt	8.41	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-50-8	Copper	2.14	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7439-89-6	Iron	323	ug/L		33.0	100	100	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7439-95-4	Magnesium	7800	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7439-96-5	Manganese	1410	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 13:26	210503-6	2113881
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-02-0	Nickel	7.07	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-09-7	Potassium	3940	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-23-5	Sodium	325000	ug/L		800	2500	2500	10	MS	PRB	05/03/21 13:26	210503-6	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:00	210430-1	2113881
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:00	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:01	210430-4	2113881
7440-66-6	Zinc	15.8	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:01	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204007 **BASIS:** As Received **DATE COLLECTED** 05-APR-21

CLIENT ID: MW-S60-04052021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	36.9	ug/L	J	19.3	50.0	50.0	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-39-3	Barium	9.96	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-70-2	Calcium	21000	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-48-4	Cobalt	0.518	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-50-8	Copper	18.5	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7439-89-6	Iron	62.7	ug/L	J	33.0	100	100	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7439-95-4	Magnesium	5130	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7439-96-5	Manganese	9.38	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7439-98-7	Molybdenum	23.2	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-02-0	Nickel	1.16	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-09-7	Potassium	3150	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-23-5	Sodium	25600	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-61-1	Total Uranium	50.9	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.114	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:02	210430-1	2113881
7440-61-1	Uranium-238	50.7	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:02	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:05	210430-4	2113881
7440-66-6	Zinc	4.68	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:05	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204008 **BASIS:** Filtered **DATE COLLECTED** 05−APR−21

CLIENT ID: MW−S60−04052021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−39−3	Barium	9.40	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−70−2	Calcium	20100	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−48−4	Cobalt	0.477	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−50−8	Copper	16.5	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7439−95−4	Magnesium	4920	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7439−96−5	Manganese	9.30	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7439−98−7	Molybdenum	22.7	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−02−0	Nickel	1.18	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−09−7	Potassium	3010	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−23−5	Sodium	24700	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−61−1	Total Uranium	35.5	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0775	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:03	210430−1	2113881
7440−61−1	Uranium−238	35.5	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:03	210430−1	2113881
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:08	210430−4	2113881
7440−66−6	Zinc	3.77	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:08	210430−4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204009 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: EQ Blank1-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:12	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-39-3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	04/30/21 20:12	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:12	210430-4	2113881
7440-70-2	Calcium	84.8	ug/L	J	80.0	200	200	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-50-8	Copper	1.37	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7439-89-6	Iron	68.6	ug/L	J	33.0	100	100	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:12	210430-4	2113881
7439-95-4	Magnesium	10.0	ug/L	U	10.0	30.0	30.0	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7439-96-5	Manganese	1.15	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 20:12	210430-4	2113881
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-09-7	Potassium	80.0	ug/L	U	80.0	300	300	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:12	210430-4	2113881
7440-23-5	Sodium	347	ug/L		80.0	250	250	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:12	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:12	210430-4	2113881
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:05	210430-1	2113881
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:05	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/04/21 22:48	210504-7	2113881
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/04/21 22:48	210504-7	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204010 **BASIS:** Filtered **DATE COLLECTED** 06-APR-21

CLIENT ID: EQ Blank1-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:16	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-39-3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	04/30/21 20:16	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:16	210430-4	2113881
7440-70-2	Calcium	231	ug/L		80.0	200	200	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7439-89-6	Iron	51.6	ug/L	J	33.0	100	100	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:16	210430-4	2113881
7439-95-4	Magnesium	15.6	ug/L	J	10.0	30.0	30.0	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 20:16	210430-4	2113881
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-09-7	Potassium	88.0	ug/L	J	80.0	300	300	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:16	210430-4	2113881
7440-23-5	Sodium	223	ug/L	J	80.0	250	250	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:16	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:16	210430-4	2113881
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:07	210430-1	2113881
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:07	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/04/21 22:51	210504-7	2113881
7440-66-6	Zinc	4.79	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/04/21 22:51	210504-7	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204011 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: MW-S29-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-39-3	Barium	3.97	ug/L	J	0.670	4.00	4.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-70-2	Calcium	5280	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-48-4	Cobalt	9.29	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7439-95-4	Magnesium	864	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7439-96-5	Manganese	1.09	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-02-0	Nickel	1.29	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-09-7	Potassium	2750	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-23-5	Sodium	16100	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:12	210430-1	2113881
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:12	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:27	210430-4	2113881
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:27	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204012 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−S29−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−39−3	Barium	4.11	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−70−2	Calcium	5270	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−48−4	Cobalt	9.33	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−50−8	Copper	0.350	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7439−95−4	Magnesium	871	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7439−96−5	Manganese	1.11	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−02−0	Nickel	1.53	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−09−7	Potassium	2750	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−23−5	Sodium	16400	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:14	210430−1	2113881
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:14	210430−1	2113881
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:30	210430−4	2113881
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:30	210430−4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204013 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: HA20-CMT-6(OW)-040620 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	110	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-39-3	Barium	24.7	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-70-2	Calcium	47900	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-48-4	Cobalt	0.799	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-50-8	Copper	0.848	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7439-89-6	Iron	227	ug/L		33.0	100	100	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7439-95-4	Magnesium	9630	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7439-96-5	Manganese	540	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7439-98-7	Molybdenum	4.42	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-02-0	Nickel	0.767	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-09-7	Potassium	5350	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-23-5	Sodium	11500	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-61-1	Total Uranium	8.07	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0573	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:16	210430-1	2113881
7440-61-1	Uranium-238	8.01	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:16	210430-1	2113881
7440-62-2	Vanadium	3.64	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:34	210430-4	2113881
7440-66-6	Zinc	5.28	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:34	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204014 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: HA20−CMT−6(OW)−040620 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−39−3	Barium	23.3	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−70−2	Calcium	47000	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−48−4	Cobalt	0.659	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−50−8	Copper	0.321	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7439−89−6	Iron	55.8	ug/L	J	33.0	100	100	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7439−95−4	Magnesium	9420	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7439−96−5	Manganese	512	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7439−98−7	Molybdenum	4.57	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−02−0	Nickel	0.818	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−09−7	Potassium	5180	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−23−5	Sodium	11200	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−61−1	Total Uranium	7.85	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0554	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:18	210430−1	2113881
7440−61−1	Uranium−238	7.80	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:18	210430−1	2113881
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:37	210430−4	2113881
7440−66−6	Zinc	4.50	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:37	210430−4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204015 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: MW-8A-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-39-3	Barium	12.3	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-70-2	Calcium	19800	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-48-4	Cobalt	0.525	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-50-8	Copper	17.4	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7439-89-6	Iron	165	ug/L		33.0	100	100	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7439-92-1	Lead	1.19	ug/L	J	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7439-95-4	Magnesium	4880	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7439-96-5	Manganese	7.50	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7439-98-7	Molybdenum	37.6	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-02-0	Nickel	1.49	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-09-7	Potassium	2880	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-23-5	Sodium	24200	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-61-1	Total Uranium	282	ug/L		0.335	1.00	1.00			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.536	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:19	210430-1	2113881
7440-61-1	Uranium-238	282	ug/L		0.335	1.00	1.00	5	MS	PRB	05/03/21 10:58	210502-5	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:41	210430-4	2113881
7440-66-6	Zinc	5.86	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:41	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204016 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−8A−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−39−3	Barium	11.7	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−70−2	Calcium	19700	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−48−4	Cobalt	0.500	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−50−8	Copper	5.72	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7439−89−6	Iron	102	ug/L		33.0	100	100	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7439−95−4	Magnesium	4830	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7439−96−5	Manganese	7.18	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7439−98−7	Molybdenum	37.5	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−02−0	Nickel	1.36	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−09−7	Potassium	2840	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−23−5	Sodium	23900	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−61−1	Total Uranium	224	ug/L		0.335	1.00	1.00			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.415	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:27	210430−1	2113881
7440−61−1	Uranium−238	224	ug/L		0.335	1.00	1.00	5	MS	PRB	05/03/21 11:00	210502−5	2113881
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:45	210430−4	2113881
7440−66−6	Zinc	5.02	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:45	210430−4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204017 **BASIS:** As Received **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−BS36−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	92.9	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−38−2	Arsenic	7.05	ug/L		2.00	5.00	5.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−39−3	Barium	116	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−70−2	Calcium	39200	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−48−4	Cobalt	16.1	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−50−8	Copper	0.652	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7439−89−6	Iron	22300	ug/L		33.0	100	100	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7439−95−4	Magnesium	13400	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7439−96−5	Manganese	727	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7439−98−7	Molybdenum	0.632	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−02−0	Nickel	1.06	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−09−7	Potassium	6370	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−23−5	Sodium	60200	ug/L		800	2500	2500	10	MS	PRB	05/03/21 13:28	210503−6	2113881
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−61−1	Total Uranium	0.139	ug/L	J	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:30	210430−1	2113881
7440−61−1	Uranium−238	0.139	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:30	210430−1	2113881
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:48	210430−4	2113881
7440−66−6	Zinc	4.65	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:48	210430−4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204018 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−BS36−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	34.2	ug/L	J	19.3	50.0	50.0	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−38−2	Arsenic	6.79	ug/L		2.00	5.00	5.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−39−3	Barium	113	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−70−2	Calcium	38400	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−48−4	Cobalt	12.9	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7439−89−6	Iron	21400	ug/L		33.0	100	100	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7439−95−4	Magnesium	13100	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7439−96−5	Manganese	716	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7439−98−7	Molybdenum	0.488	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−02−0	Nickel	0.764	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−09−7	Potassium	6220	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−23−5	Sodium	61800	ug/L		800	2500	2500	10	MS	PRB	05/03/21 13:30	210503−6	2113881
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:32	210430−1	2113881
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:32	210430−1	2113881
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:52	210430−4	2113881
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:52	210430−4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204019 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: HA20-CMT-5(OW)-040620 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	185	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-39-3	Barium	35.0	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-70-2	Calcium	41600	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-48-4	Cobalt	0.872	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-50-8	Copper	0.331	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7439-89-6	Iron	307	ug/L		33.0	100	100	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7439-95-4	Magnesium	8580	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7439-96-5	Manganese	519	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7439-98-7	Molybdenum	2.26	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-02-0	Nickel	0.964	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-09-7	Potassium	6060	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-23-5	Sodium	11700	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-61-1	Total Uranium	5.01	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0341	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:34	210430-1	2113881
7440-61-1	Uranium-238	4.98	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:34	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:56	210430-4	2113881
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:56	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540204 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540204020 **BASIS:** Filtered **DATE COLLECTED** 06-APR-21

CLIENT ID: HA20-CMT-5(OW)-040620 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-39-3	Barium	33.1	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-70-2	Calcium	42500	ug/L		80.0	200	200	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-48-4	Cobalt	0.696	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-50-8	Copper	0.305	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7439-89-6	Iron	88.2	ug/L	J	33.0	100	100	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7439-95-4	Magnesium	8700	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7439-96-5	Manganese	491	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7439-98-7	Molybdenum	2.22	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-02-0	Nickel	1.08	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-09-7	Potassium	6070	ug/L		80.0	300	300	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-23-5	Sodium	11800	ug/L		80.0	250	250	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-61-1	Total Uranium	4.96	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0340	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:35	210430-1	2113881
7440-61-1	Uranium-238	4.93	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:35	210430-1	2113881
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:59	210430-4	2113881
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 20:59	210430-4	2113881

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113881	2113880	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.35	ug/L	0.36	ug/L	98.4	90.0 − 110.0	MS	30−APR−21 10:08	210430−1
	Uranium−238	49.3	ug/L	49.64	ug/L	99.2	90.0 − 110.0	MS	30−APR−21 10:08	210430−1
	Aluminum	5210	ug/L	5050	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Antimony	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Arsenic	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Barium	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Beryllium	53.3	ug/L	50	ug/L	106.6	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Cadmium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Calcium	5100	ug/L	5000	ug/L	102	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Chromium	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Cobalt	52.7	ug/L	50	ug/L	105.4	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Copper	53.4	ug/L	50	ug/L	106.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Iron	5170	ug/L	5000	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Lead	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Magnesium	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Manganese	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Molybdenum	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Nickel	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Potassium	5160	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Selenium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Silver	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Sodium	5470	ug/L	5000	ug/L	109.5	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Thallium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Thorium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Vanadium	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Zinc	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Uranium−238	50	ug/L	49.64	ug/L	100.7	90.0 − 110.0	MS	03−MAY−21 09:05	210502−5
	Calcium	5110	ug/L	5000	ug/L	102.1	90.0 − 110.0	MS	03−MAY−21 12:23	210503−6
	Magnesium	5390	ug/L	5000	ug/L	107.7	90.0 − 110.0	MS	03−MAY−21 12:23	210503−6
	Manganese	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	03−MAY−21 12:23	210503−6
	Sodium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	03−MAY−21 12:23	210503−6

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Aluminum	5060	ug/L	5050	ug/L	100.3	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Arsenic	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Beryllium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Chromium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Cobalt	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Copper	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Iron	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Magnesium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Manganese	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Nickel	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Potassium	5490	ug/L	5000	ug/L	109.8	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Selenium	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Sodium	5150	ug/L	5000	ug/L	103	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Vanadium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
	Zinc	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	04−MAY−21 19:04	210504−7
CCV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	98.7	90.0 − 110.0	MS	30−APR−21 10:17	210430−1
	Uranium−238	49.4	ug/L	49.64	ug/L	99.5	90.0 − 110.0	MS	30−APR−21 10:17	210430−1
	Aluminum	5110	ug/L	5050	ug/L	101.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Antimony	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Arsenic	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Barium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Beryllium	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Cadmium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Calcium	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Chromium	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Cobalt	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Copper	52.8	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Iron	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Lead	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Magnesium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Manganese	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Molybdenum	52.7	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Nickel	52.6	ug/L	50	ug/L	105.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Potassium	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Selenium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Silver	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Sodium	5380	ug/L	5000	ug/L	107.6	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Thallium	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Thorium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Vanadium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Zinc	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Uranium−238	51	ug/L	49.64	ug/L	102.7	90.0 − 110.0	MS	03−MAY−21 09:14	210502−5
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	03−MAY−21 12:33	210503−6
	Magnesium	5330	ug/L	5000	ug/L	106.6	90.0 − 110.0	MS	03−MAY−21 12:33	210503−6
	Manganese	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	03−MAY−21 12:33	210503−6
	Sodium	5200	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	03−MAY−21 12:33	210503−6
	Aluminum	5030	ug/L	5050	ug/L	99.6	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Arsenic	48.4	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Beryllium	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Calcium	4960	ug/L	5000	ug/L	99.1	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Chromium	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Cobalt	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Copper	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Iron	5070	ug/L	5000	ug/L	101.5	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Magnesium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Manganese	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Nickel	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Potassium	5450	ug/L	5000	ug/L	109	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Selenium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Sodium	5180	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Vanadium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
	Zinc	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	04−MAY−21 19:22	210504−7
CCV02										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.9	90.0 − 110.0	MS	30−APR−21 11:33	210430−1
	Uranium−238	48.7	ug/L	49.64	ug/L	98.2	90.0 − 110.0	MS	30−APR−21 11:33	210430−1
	Aluminum	5180	ug/L	5050	ug/L	102.6	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Antimony	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Arsenic	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Barium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Beryllium	53	ug/L	50	ug/L	106.1	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Cadmium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Chromium	52.1	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Cobalt	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Copper	53.2	ug/L	50	ug/L	106.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Iron	5220	ug/L	5000	ug/L	104.5	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Lead	52.3	ug/L	50	ug/L	104.7	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Magnesium	5210	ug/L	5000	ug/L	104.2	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Manganese	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Molybdenum	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Nickel	52.9	ug/L	50	ug/L	105.8	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Potassium	5210	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Selenium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Silver	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Sodium	5430	ug/L	5000	ug/L	108.7	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Thorium	54.9	ug/L	50	ug/L	109.8	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Vanadium	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Zinc	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Uranium−238	51.4	ug/L	49.64	ug/L	103.6	90.0 − 110.0	MS	03−MAY−21 10:47	210502−5
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	03−MAY−21 12:39	210503−6

METALS
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Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Magnesium	5320	ug/L	5000	ug/L	106.5	90.0 − 110.0	MS	03−MAY−21 12:39	210503−6
	Manganese	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	03−MAY−21 12:39	210503−6
	Sodium	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	MS	03−MAY−21 12:39	210503−6
	Aluminum	5040	ug/L	5050	ug/L	99.9	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Arsenic	48.6	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Beryllium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Calcium	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Chromium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Cobalt	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Copper	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Iron	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Magnesium	5040	ug/L	5000	ug/L	100.8	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Manganese	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Nickel	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Potassium	5530	ug/L	5000	ug/L	110.5	90.0 − 110.0 *	MS	04−MAY−21 19:33	210504−7
	Selenium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Sodium	5230	ug/L	5000	ug/L	104.5	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Vanadium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
	Zinc	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	04−MAY−21 19:33	210504−7
CCV03										
	Uranium−235	0.35	ug/L	0.36	ug/L	98.2	90.0 − 110.0	MS	30−APR−21 11:49	210430−1
	Uranium−238	48.9	ug/L	49.64	ug/L	98.6	90.0 − 110.0	MS	30−APR−21 11:49	210430−1
	Aluminum	5040	ug/L	5050	ug/L	99.8	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Antimony	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Arsenic	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Barium	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Beryllium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Cadmium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Chromium	49.5	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Cobalt	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	30−APR−21 19:07	210430−4

METALS
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Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Copper	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Iron	4950	ug/L	5000	ug/L	98.9	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Lead	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Manganese	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Molybdenum	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Nickel	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Potassium	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Selenium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Silver	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Sodium	5330	ug/L	5000	ug/L	106.6	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Thallium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Thorium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Vanadium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Zinc	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 19:07	210430−4
	Uranium−238	51.4	ug/L	49.64	ug/L	103.6	90.0 − 110.0	MS	03−MAY−21 11:02	210502−5
	Calcium	5040	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	03−MAY−21 12:58	210503−6
	Magnesium	5270	ug/L	5000	ug/L	105.4	90.0 − 110.0	MS	03−MAY−21 12:58	210503−6
	Manganese	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	03−MAY−21 12:58	210503−6
	Sodium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	03−MAY−21 12:58	210503−6
	Aluminum	4740	ug/L	5050	ug/L	93.8	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Arsenic	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Beryllium	48.3	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Calcium	4620	ug/L	5000	ug/L	92.5	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Chromium	46.1	ug/L	50	ug/L	92.3	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Cobalt	46.1	ug/L	50	ug/L	92.2	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Copper	47.3	ug/L	50	ug/L	94.5	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Iron	4730	ug/L	5000	ug/L	94.5	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Magnesium	4760	ug/L	5000	ug/L	95.1	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Manganese	47.5	ug/L	50	ug/L	95	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Nickel	46.3	ug/L	50	ug/L	92.7	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7

METALS
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Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Potassium	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Selenium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Sodium	4880	ug/L	5000	ug/L	97.6	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Vanadium	46.4	ug/L	50	ug/L	92.9	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
	Zinc	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	04−MAY−21 22:40	210504−7
CCV04										
	Uranium−235	0.34	ug/L	0.36	ug/L	93.4	90.0 − 110.0	MS	30−APR−21 12:09	210430−1
	Uranium−238	45.8	ug/L	49.64	ug/L	92.3	90.0 − 110.0	MS	30−APR−21 12:09	210430−1
	Aluminum	4940	ug/L	5050	ug/L	97.9	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Antimony	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Arsenic	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Barium	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Beryllium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Cadmium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Calcium	4840	ug/L	5000	ug/L	96.7	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Chromium	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Cobalt	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Copper	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Iron	4850	ug/L	5000	ug/L	97.1	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Lead	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Manganese	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Molybdenum	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Nickel	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Potassium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Selenium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Silver	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Sodium	5190	ug/L	5000	ug/L	103.8	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Thallium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Thorium	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Vanadium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	30−APR−21 19:40	210430−4

METALS
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Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Zinc	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 19:40	210430−4
	Calcium	5050	ug/L	5000	ug/L	101	90.0 − 110.0	MS	03−MAY−21 13:14	210503−6
	Magnesium	5290	ug/L	5000	ug/L	105.8	90.0 − 110.0	MS	03−MAY−21 13:14	210503−6
	Manganese	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	03−MAY−21 13:14	210503−6
	Sodium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	03−MAY−21 13:14	210503−6
	Aluminum	4670	ug/L	5050	ug/L	92.4	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Arsenic	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Beryllium	46.1	ug/L	50	ug/L	92.2	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Calcium	4600	ug/L	5000	ug/L	92	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Chromium	45.5	ug/L	50	ug/L	91	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Cobalt	45.7	ug/L	50	ug/L	91.5	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Copper	46.5	ug/L	50	ug/L	93	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Iron	4630	ug/L	5000	ug/L	92.6	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Magnesium	4690	ug/L	5000	ug/L	93.9	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Manganese	46.2	ug/L	50	ug/L	92.3	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Nickel	45.9	ug/L	50	ug/L	91.9	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Potassium	5000	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Selenium	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Sodium	4760	ug/L	5000	ug/L	95.2	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Vanadium	46	ug/L	50	ug/L	91.9	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
	Zinc	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	04−MAY−21 22:55	210504−7
CCV05										
	Uranium−235	0.35	ug/L	0.36	ug/L	96.7	90.0 − 110.0	MS	30−APR−21 12:23	210430−1
	Uranium−238	47.3	ug/L	49.64	ug/L	95.4	90.0 − 110.0	MS	30−APR−21 12:23	210430−1
	Aluminum	4940	ug/L	5050	ug/L	97.8	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Antimony	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Arsenic	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Barium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Beryllium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Cadmium	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Calcium	4770	ug/L	5000	ug/L	95.4	90.0 − 110.0	MS	30−APR−21 20:19	210430−4

METALS
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Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Chromium	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Cobalt	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Copper	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Iron	4840	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Magnesium	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Manganese	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Molybdenum	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Nickel	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Potassium	4870	ug/L	5000	ug/L	97.5	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Selenium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Silver	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Sodium	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Thallium	48.8	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Thorium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Vanadium	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Zinc	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 20:19	210430−4
	Calcium	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	MS	03−MAY−21 13:36	210503−6
	Magnesium	5290	ug/L	5000	ug/L	105.7	90.0 − 110.0	MS	03−MAY−21 13:36	210503−6
	Manganese	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	03−MAY−21 13:36	210503−6
	Sodium	5080	ug/L	5000	ug/L	101.5	90.0 − 110.0	MS	03−MAY−21 13:36	210503−6
CCV06										
	Uranium−235	0.35	ug/L	0.36	ug/L	98.4	90.0 − 110.0	MS	30−APR−21 12:37	210430−1
	Uranium−238	49.2	ug/L	49.64	ug/L	99.1	90.0 − 110.0	MS	30−APR−21 12:37	210430−1
	Aluminum	4880	ug/L	5050	ug/L	96.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Antimony	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Arsenic	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Barium	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Beryllium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Cadmium	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Calcium	4720	ug/L	5000	ug/L	94.4	90.0 − 110.0	MS	30−APR−21 21:03	210430−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Chromium	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Cobalt	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Copper	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Iron	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Lead	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Magnesium	4910	ug/L	5000	ug/L	98.3	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Manganese	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Molybdenum	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Nickel	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Potassium	4790	ug/L	5000	ug/L	95.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Selenium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Silver	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Sodium	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Thallium	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Thorium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Vanadium	48.1	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Zinc	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	30−APR−21 21:03	210430−4

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
-2b-
CRDL Standard for ICP & ICPMS

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium-235	.0012	ug/L	.0014	ug/L	85.7	80.0 - 120.0	MS	30-APR-21 10:11	210430-1
	Uranium-238	.192	ug/L	.2	ug/L	96.2	80.0 - 120.0	MS	30-APR-21 10:11	210430-1
	Aluminum	50.1	ug/L	50	ug/L	100.2	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Antimony	2.9	ug/L	3	ug/L	96.6	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Arsenic	4.8	ug/L	5	ug/L	95.9	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Barium	4.28	ug/L	4	ug/L	106.9	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Beryllium	.563	ug/L	.5	ug/L	112.6	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Cadmium	.957	ug/L	1	ug/L	95.7	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Calcium	230	ug/L	200	ug/L	115	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Chromium	10.2	ug/L	10	ug/L	102.4	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Cobalt	1.04	ug/L	1	ug/L	104.3	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Copper	2.1	ug/L	2	ug/L	105.2	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Iron	101	ug/L	100	ug/L	101.3	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Lead	2.06	ug/L	2	ug/L	103.2	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Magnesium	29.3	ug/L	30	ug/L	97.6	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Manganese	5.13	ug/L	5	ug/L	102.6	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Molybdenum	.963	ug/L	1	ug/L	96.3	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Nickel	2.09	ug/L	2	ug/L	104.5	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Potassium	301	ug/L	300	ug/L	100.4	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Selenium	4.76	ug/L	5	ug/L	95.1	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Silver	.965	ug/L	1	ug/L	96.5	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Sodium	262	ug/L	250	ug/L	104.9	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Thallium	1.79	ug/L	2	ug/L	89.7	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Thorium	2.04	ug/L	2	ug/L	102.2	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Vanadium	20.1	ug/L	20	ug/L	100.3	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Zinc	20.9	ug/L	20	ug/L	104.3	80.0 - 120.0	MS	30-APR-21 16:57	210430-4
	Uranium-238	.206	ug/L	.2	ug/L	103	80.0 - 120.0	MS	03-MAY-21 09:08	210502-5
	Calcium	245	ug/L	200	ug/L	122.7	80.0 - 120.0	MS	03-MAY-21 12:27	210503-6
	Magnesium	33.1	ug/L	30	ug/L	110.2	80.0 - 120.0	MS	03-MAY-21 12:27	210503-6
	Manganese	5.19	ug/L	5	ug/L	103.9	80.0 - 120.0	MS	03-MAY-21 12:27	210503-6
	Sodium	273	ug/L	250	ug/L	109.4	80.0 - 120.0	MS	03-MAY-21 12:27	210503-6
	Aluminum	51	ug/L	50	ug/L	102	80.0 - 120.0	MS	04-MAY-21 19:11	210504-7

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
	Arsenic	4.63	ug/L	5	ug/L	92.5	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Beryllium	.484	ug/L	.5	ug/L	96.8	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Calcium	220	ug/L	200	ug/L	110.1	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Chromium	9.84	ug/L	10	ug/L	98.4	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Cobalt	1.01	ug/L	1	ug/L	100.6	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Copper	2.15	ug/L	2	ug/L	107.3	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Iron	99.5	ug/L	100	ug/L	99.5	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Magnesium	30.5	ug/L	30	ug/L	101.5	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Manganese	4.93	ug/L	5	ug/L	98.6	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Nickel	1.96	ug/L	2	ug/L	97.8	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Potassium	326	ug/L	300	ug/L	108.8	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Selenium	5.04	ug/L	5	ug/L	100.8	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Sodium	264	ug/L	250	ug/L	105.4	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Vanadium	19.8	ug/L	20	ug/L	99.2	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7
	Zinc	20.1	ug/L	20	ug/L	100.6	80.0 − 120.0	MS	04−MAY−21 19:11	210504−7

***Analytical Methods:**
MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	30−APR−21 10:09	210430−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	30−APR−21 10:09	210430−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	30−APR−21 16:53	210430−4
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	30−APR−21 16:53	210430−4
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	30−APR−21 16:53	210430−4
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	30−APR−21 16:53	210430−4
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	30−APR−21 16:53	210430−4
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	30−APR−21 16:53	210430−4
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	30−APR−21 16:53	210430−4
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	30−APR−21 16:53	210430−4
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	30−APR−21 16:53	210430−4
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	30−APR−21 16:53	210430−4
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	30−APR−21 16:53	210430−4
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	30−APR−21 16:53	210430−4
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	30−APR−21 16:53	210430−4
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	30−APR−21 16:53	210430−4
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	30−APR−21 16:53	210430−4
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	03−MAY−21 09:07	210502−5
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	03−MAY−21 12:25	210503−6
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	03−MAY−21 12:25	210503−6
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	03−MAY−21 12:25	210503−6
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	03−MAY−21 12:25	210503−6

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	04−MAY−21 19:07	210504−7
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	04−MAY−21 19:07	210504−7
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	04−MAY−21 19:07	210504−7
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	04−MAY−21 19:07	210504−7
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	04−MAY−21 19:07	210504−7
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	04−MAY−21 19:07	210504−7
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	04−MAY−21 19:07	210504−7
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 10:18	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 10:18	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 17:11	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 17:11	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:11	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 17:11	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 17:11	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 17:11	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 17:11	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 17:11	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 17:11	210430−4

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 17:11	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 17:11	210430−4
	Molybdenum	1.52	+/−1		0.2	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 17:11	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:11	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 17:11	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:11	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:11	210430−4
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	03−MAY−21 09:16	210502−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	03−MAY−21 12:35	210503−6
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	03−MAY−21 12:35	210503−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 12:35	210503−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 12:35	210503−6
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	04−MAY−21 19:25	210504−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	04−MAY−21 19:25	210504−7
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	04−MAY−21 19:25	210504−7
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	04−MAY−21 19:25	210504−7
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	04−MAY−21 19:25	210504−7

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 19:25	210504−7
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 19:25	210504−7
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 11:35	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 11:35	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 17:22	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 17:22	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:22	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 17:22	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 17:22	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 17:22	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 17:22	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 17:22	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 17:22	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 17:22	210430−4
	Molybdenum	0.703	+/−1	J	0.2	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 17:22	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:22	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 17:22	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Thorium	0.738	+/−2	J	0.7	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:22	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:22	210430−4
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	03−MAY−21 10:49	210502−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	03−MAY−21 12:41	210503−6

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	03−MAY−21 12:41	210503−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 12:41	210503−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 12:41	210503−6
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	04−MAY−21 19:36	210504−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	04−MAY−21 19:36	210504−7
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	04−MAY−21 19:36	210504−7
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	04−MAY−21 19:36	210504−7
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	04−MAY−21 19:36	210504−7
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 19:36	210504−7
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 19:36	210504−7
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 11:51	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 11:51	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 19:11	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 19:11	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 19:11	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 19:11	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 19:11	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 19:11	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 19:11	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 19:11	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 19:11	210430−4

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 19:11	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 19:11	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 19:11	210430−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 19:11	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 19:11	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 19:11	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 19:11	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 19:11	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 19:11	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 19:11	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 19:11	210430−4
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	03−MAY−21 11:04	210502−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	03−MAY−21 13:00	210503−6
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	03−MAY−21 13:00	210503−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 13:00	210503−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 13:00	210503−6
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	04−MAY−21 22:44	210504−7
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 22:44	210504−7
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	04−MAY−21 22:44	210504−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	04−MAY−21 22:44	210504−7
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	04−MAY−21 22:44	210504−7
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 22:44	210504−7
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	04−MAY−21 22:44	210504−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	04−MAY−21 22:44	210504−7
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	04−MAY−21 22:44	210504−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	04−MAY−21 22:44	210504−7
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	04−MAY−21 22:44	210504−7

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	04−MAY−21 22:44	210504−7
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 22:44	210504−7
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	04−MAY−21 22:44	210504−7
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 22:44	210504−7
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 22:44	210504−7
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 12:11	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 12:11	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 19:43	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 19:43	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 19:43	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 19:43	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 19:43	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 19:43	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 19:43	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 19:43	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 19:43	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 19:43	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 19:43	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 19:43	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 19:43	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 19:43	210430−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 19:43	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 19:43	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 19:43	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 19:43	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 19:43	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 19:43	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 19:43	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 19:43	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 19:43	210430−4

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 19:43	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	03−MAY−21 13:16	210503−6
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	03−MAY−21 13:16	210503−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 13:16	210503−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 13:16	210503−6
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	04−MAY−21 22:59	210504−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	04−MAY−21 22:59	210504−7
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	04−MAY−21 22:59	210504−7
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	04−MAY−21 22:59	210504−7
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	04−MAY−21 22:59	210504−7
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 22:59	210504−7
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 22:59	210504−7
CCB05										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 12:25	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 12:25	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 20:23	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 20:23	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 20:23	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 20:23	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 20:23	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 20:23	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 20:23	210430−4

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 20:23	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 20:23	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 20:23	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 20:23	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 20:23	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 20:23	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 20:23	210430−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 20:23	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 20:23	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 20:23	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 20:23	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 20:23	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 20:23	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 20:23	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 20:23	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 20:23	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 20:23	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	03−MAY−21 13:38	210503−6
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	03−MAY−21 13:38	210503−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 13:38	210503−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 13:38	210503−6
CCB06										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 12:39	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 12:39	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 21:06	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 21:06	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 21:06	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 21:06	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 21:06	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 21:06	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 21:06	210430−4

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540204

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 21:06	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 21:06	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 21:06	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 21:06	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 21:06	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 21:06	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 21:06	210430−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 21:06	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 21:06	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 21:06	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 21:06	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 21:06	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 21:06	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 21:06	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 21:06	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 21:06	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 21:06	210430−4

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 540204
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204792939								
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0002	ug/L					30−APR−21 10:13	210430−1
	Uranium−238	0.02	ug/L					30−APR−21 10:13	210430−1
ICSAB01									
	Uranium−235	0.133	ug/L	.145	ug/L	91.7	80.0 − 120.0	30−APR−21 10:15	210430−1
	Uranium−238	19.1	ug/L	19.86	ug/L	96.1	80.0 − 120.0	30−APR−21 10:15	210430−1

METALS
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Interference Check Sample

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	91900	ug/L	100000	ug/L	92	80.0 − 120.0	30−APR−21 17:01	210430−4
	Antimony	0.048	ug/L					30−APR−21 17:01	210430−4
	Arsenic	0.08	ug/L					30−APR−21 17:01	210430−4
	Barium	2.64	ug/L					30−APR−21 17:01	210430−4
	Beryllium	0.004	ug/L					30−APR−21 17:01	210430−4
	Cadmium	0.763	ug/L					30−APR−21 17:01	210430−4
	Calcium	94800	ug/L	100000	ug/L	94.8	80.0 − 120.0	30−APR−21 17:01	210430−4
	Chromium	0.855	ug/L					30−APR−21 17:01	210430−4
	Cobalt	0.485	ug/L					30−APR−21 17:01	210430−4
	Copper	0.164	ug/L					30−APR−21 17:01	210430−4
	Iron	82500	ug/L	100000	ug/L	82.5	80.0 − 120.0	30−APR−21 17:01	210430−4
	Lead	0.184	ug/L					30−APR−21 17:01	210430−4
	Magnesium	89800	ug/L	100000	ug/L	89.8	80.0 − 120.0	30−APR−21 17:01	210430−4
	Manganese	6.7	ug/L					30−APR−21 17:01	210430−4
	Molybdenum	2060	ug/L	2000	ug/L	103	80.0 − 120.0	30−APR−21 17:01	210430−4
	Nickel	0.426	ug/L					30−APR−21 17:01	210430−4
	Potassium	92900	ug/L	100000	ug/L	92.9	80.0 − 120.0	30−APR−21 17:01	210430−4
	Selenium	0.281	ug/L					30−APR−21 17:01	210430−4
	Silver	0.121	ug/L					30−APR−21 17:01	210430−4
	Sodium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	30−APR−21 17:01	210430−4
	Thallium	−0.077	ug/L					30−APR−21 17:01	210430−4
	Thorium	1.63	ug/L					30−APR−21 17:01	210430−4
	Vanadium	0.004	ug/L					30−APR−21 17:01	210430−4
	Zinc	2.38	ug/L					30−APR−21 17:01	210430−4
ICSAB01									
	Aluminum	91700	ug/L	100000	ug/L	91.7	80.0 − 120.0	30−APR−21 17:04	210430−4
	Antimony	19.8	ug/L	20	ug/L	99.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Arsenic	20.9	ug/L	20	ug/L	104	80.0 − 120.0	30−APR−21 17:04	210430−4
	Barium	22.2	ug/L	22.35	ug/L	99.2	80.0 − 120.0	30−APR−21 17:04	210430−4
	Beryllium	18.8	ug/L	20	ug/L	94.1	80.0 − 120.0	30−APR−21 17:04	210430−4

METALS
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Interference Check Sample

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cadmium	20.0	ug/L	20.72	ug/L	96.5	80.0 − 120.0	30−APR−21 17:04	210430−4
	Calcium	94000	ug/L	100000	ug/L	94	80.0 − 120.0	30−APR−21 17:04	210430−4
	Chromium	20.6	ug/L	20	ug/L	103	80.0 − 120.0	30−APR−21 17:04	210430−4
	Cobalt	19.9	ug/L	20.65	ug/L	96.4	80.0 − 120.0	30−APR−21 17:04	210430−4
	Copper	17.8	ug/L	20	ug/L	89	80.0 − 120.0	30−APR−21 17:04	210430−4
	Iron	82600	ug/L	100000	ug/L	82.6	80.0 − 120.0	30−APR−21 17:04	210430−4
	Lead	18.8	ug/L	20	ug/L	94.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Magnesium	90400	ug/L	100000	ug/L	90.4	80.0 − 120.0	30−APR−21 17:04	210430−4
	Manganese	25.8	ug/L	25.72	ug/L	100	80.0 − 120.0	30−APR−21 17:04	210430−4
	Molybdenum	2060	ug/L	2000	ug/L	103	80.0 − 120.0	30−APR−21 17:04	210430−4
	Nickel	18.8	ug/L	20	ug/L	93.8	80.0 − 120.0	30−APR−21 17:04	210430−4
	Potassium	93700	ug/L	100000	ug/L	93.7	80.0 − 120.0	30−APR−21 17:04	210430−4
	Selenium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	30−APR−21 17:04	210430−4
	Silver	18.4	ug/L	20	ug/L	92.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Sodium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	30−APR−21 17:04	210430−4
	Thallium	17.9	ug/L	20	ug/L	89.3	80.0 − 120.0	30−APR−21 17:04	210430−4
	Thorium	21.2	ug/L	20	ug/L	106	80.0 − 120.0	30−APR−21 17:04	210430−4
	Vanadium	20.1	ug/L	20	ug/L	100	80.0 − 120.0	30−APR−21 17:04	210430−4
	Zinc	20.9	ug/L	20	ug/L	104	80.0 − 120.0	30−APR−21 17:04	210430−4

METALS
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Interference Check Sample

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−238	0.026	ug/L					03−MAY−21 09:10	210502−5
ICSAB01									
	Uranium−238	19.2	ug/L	19.86	ug/L	96.7	80.0 − 120.0	03−MAY−21 09:12	210502−5

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METALS
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Interference Check Sample

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	96400	ug/L	100000	ug/L	96.4	80.0 − 120.0	03−MAY−21 12:29	210503−6
	Magnesium	94600	ug/L	100000	ug/L	94.6	80.0 − 120.0	03−MAY−21 12:29	210503−6
	Manganese	5.84	ug/L					03−MAY−21 12:29	210503−6
	Sodium	99200	ug/L	100000	ug/L	99.2	80.0 − 120.0	03−MAY−21 12:29	210503−6
ICSAB01									
	Calcium	93600	ug/L	100000	ug/L	93.6	80.0 − 120.0	03−MAY−21 12:31	210503−6
	Magnesium	93200	ug/L	100000	ug/L	93.2	80.0 − 120.0	03−MAY−21 12:31	210503−6
	Manganese	25.4	ug/L	25.72	ug/L	98.9	80.0 − 120.0	03−MAY−21 12:31	210503−6
	Sodium	99100	ug/L	100000	ug/L	99.1	80.0 − 120.0	03−MAY−21 12:31	210503−6

METALS
−4−
Interference Check Sample

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	91000	ug/L	100000	ug/L	91	80.0 − 120.0	04−MAY−21 19:14	210504−7
	Arsenic	0.132	ug/L					04−MAY−21 19:14	210504−7
	Beryllium	0.009	ug/L					04−MAY−21 19:14	210504−7
	Calcium	93900	ug/L	100000	ug/L	93.9	80.0 − 120.0	04−MAY−21 19:14	210504−7
	Chromium	0.804	ug/L					04−MAY−21 19:14	210504−7
	Cobalt	0.477	ug/L					04−MAY−21 19:14	210504−7
	Copper	0.186	ug/L					04−MAY−21 19:14	210504−7
	Iron	80300	ug/L	100000	ug/L	80.3	80.0 − 120.0	04−MAY−21 19:14	210504−7
	Magnesium	89400	ug/L	100000	ug/L	89.4	80.0 − 120.0	04−MAY−21 19:14	210504−7
	Manganese	7.11	ug/L					04−MAY−21 19:14	210504−7
	Nickel	0.395	ug/L					04−MAY−21 19:14	210504−7
	Potassium	97900	ug/L	100000	ug/L	97.9	80.0 − 120.0	04−MAY−21 19:14	210504−7
	Selenium	0.144	ug/L					04−MAY−21 19:14	210504−7
	Sodium	99600	ug/L	100000	ug/L	99.6	80.0 − 120.0	04−MAY−21 19:14	210504−7
	Vanadium	−0.002	ug/L					04−MAY−21 19:14	210504−7
	Zinc	2.41	ug/L					04−MAY−21 19:14	210504−7
ICSAB01									
	Aluminum	91600	ug/L	100000	ug/L	91.6	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Arsenic	20.2	ug/L	20	ug/L	101	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Beryllium	19.2	ug/L	20	ug/L	96	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Calcium	94700	ug/L	100000	ug/L	94.7	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Chromium	20.4	ug/L	20	ug/L	102	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Cobalt	19.8	ug/L	20.65	ug/L	95.7	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Copper	18.1	ug/L	20	ug/L	90.4	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Iron	82500	ug/L	100000	ug/L	82.5	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Magnesium	89700	ug/L	100000	ug/L	89.7	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Manganese	26.7	ug/L	25.72	ug/L	104	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Nickel	18.6	ug/L	20	ug/L	93.2	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Potassium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Selenium	19.9	ug/L	20	ug/L	99.6	80.0 − 120.0	04−MAY−21 19:18	210504−7

METALS
−4−
Interference Check Sample

SDG No: 540204

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Sodium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Vanadium	20.3	ug/L	20	ug/L	102	80.0 − 120.0	04−MAY−21 19:18	210504−7
	Zinc	20.5	ug/L	20	ug/L	103	80.0 − 120.0	04−MAY−21 19:18	210504−7

METALS
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Matrix Spike Summary

SDG NO. 540204 **Client ID** HA20−CMT3T(OW)−04052021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540204001 **Spike ID:** 1204792941

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Nickel	ug/L	75−125	46.2		0.879	J	50.0	90.7		MS
Potassium	ug/L		19800		18000		2000	88.5	N/A	MS
Selenium	ug/L	75−125	49.6		2.00	U	50.0	97.4		MS
Silver	ug/L	75−125	48.7		0.300	U	50.0	97.4		MS
Sodium	ug/L		113000		112000		2000	44.2	N/A	MS
Thallium	ug/L	75−125	46.5		0.600	U	50.0	93.1		MS
Thorium	ug/L	75−125	51.7		0.700	U	50.0	103		MS
Uranium−235	ug/L	75−125	0.389		0.0292	J	0.360	100		MS
Uranium−238	ug/L	75−125	52.8		4.08		49.6	98.2		MS
Vanadium	ug/L	75−125	50.4		3.30	U	50.0	98.6		MS
Zinc	ug/L	75−125	51.0		3.49	J	50.0	95.1		MS
Aluminum	ug/L	75−125	1970		23.1	J	2000	97.4		MS
Antimony	ug/L	75−125	51.5		1.00	U	50.0	103		MS
Arsenic	ug/L	75−125	53.1		2.00	U	50.0	104		MS
Barium	ug/L		268		216		50.0	103	N/A	MS
Beryllium	ug/L	75−125	51.8		0.200	U	50.0	104		MS
Cadmium	ug/L	75−125	51.2		0.300	U	50.0	102		MS
Calcium	ug/L		207000		210000		2000	−151	N/A	MS
Chromium	ug/L	75−125	48.0		3.00	U	50.0	95.7		MS
Cobalt	ug/L	75−125	48.1		0.464	J	50.0	95.2		MS
Copper	ug/L	75−125	44.3		0.607	J	50.0	87.4		MS
Iron	ug/L	75−125	1920		48.2	J	2000	93.6		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 540204 **Client ID**: HA20−CMT3T(OW)−04052021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540204001 **Spike ID:** 1204792941

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Lead	ug/L	75−125	47.8		0.500	U	50.0	95.6		MS
Magnesium	ug/L		60700		58800		2000	93.9	N/A	MS
Manganese	ug/L		1370		1350		50.0	47.2	N/A	MS
Molybdenum	ug/L	75−125	78.0		21.6		50.0	113		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 540204 **Client ID** HA20−CMT3T(OW)−04052021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540204001 **Spike ID:** 1204792942

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2030		23.1	J	2000	100		MS
Antimony	ug/L	75−125	52.0		1.00	U	50.0	104		MS
Arsenic	ug/L	75−125	53.9		2.00	U	50.0	106		MS
Barium	ug/L		274		216		50.0	115	N/A	MS
Beryllium	ug/L	75−125	53.7		0.200	U	50.0	107		MS
Cadmium	ug/L	75−125	50.6		0.300	U	50.0	101		MS
Calcium	ug/L		215000		210000		2000	264	N/A	MS
Chromium	ug/L	75−125	49.0		3.00	U	50.0	97.7		MS
Cobalt	ug/L	75−125	49.1		0.464	J	50.0	97.3		MS
Copper	ug/L	75−125	44.8		0.607	J	50.0	88.3		MS
Iron	ug/L	75−125	1970		48.2	J	2000	96		MS
Lead	ug/L	75−125	48.1		0.500	U	50.0	96.2		MS
Magnesium	ug/L		61700		58800		2000	143	N/A	MS
Manganese	ug/L		1420		1350		50.0	156	N/A	MS
Molybdenum	ug/L	75−125	79.4		21.6		50.0	116		MS
Nickel	ug/L	75−125	47.0		0.879	J	50.0	92.3		MS
Potassium	ug/L		20400		18000		2000	120	N/A	MS
Selenium	ug/L	75−125	51.5		2.00	U	50.0	101		MS
Silver	ug/L	75−125	49.5		0.300	U	50.0	98.9		MS
Sodium	ug/L		115000		112000		2000	170	N/A	MS
Thallium	ug/L	75−125	47.1		0.600	U	50.0	94.2		MS
Thorium	ug/L	75−125	52.4		0.700	U	50.0	104		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 540204 **Client ID** HA20−CMT3T(OW)−04052021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540204001 **Spike ID:** 1204792942

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.385		0.0292	J	0.360	98.8		MS
Uranium−238	ug/L	75−125	53.8		4.08		49.6	100		MS
Vanadium	ug/L	75−125	51.2		3.30	U	50.0	100		MS
Zinc	ug/L	75−125	50.8		3.49	J	50.0	94.6		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−6−
Duplicate Sample Summary

SDG No.: 540204 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA20−CMT3T(OW)−04052021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792941 **Duplicate ID:** 1204792942 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1970		2030		2.97		MS
Antimony	ug/L	+/−20	51.5		52.0		1.07		MS
Arsenic	ug/L	+/−20	53.1		53.9		1.57		MS
Barium	ug/L	+/−20	268		274		2.13		MS
Beryllium	ug/L	+/−20	51.8		53.7		3.59		MS
Cadmium	ug/L	+/−20	51.2		50.6		1.03		MS
Calcium	ug/L	+/−20	207000		215000		3.94		MS
Chromium	ug/L	+/−20	48.0		49.0		2.02		MS
Cobalt	ug/L	+/−20	48.1		49.1		2.13		MS
Copper	ug/L	+/−20	44.3		44.8		.981		MS
Iron	ug/L	+/−20	1920		1970		2.49		MS
Lead	ug/L	+/−20	47.8		48.1		.611		MS
Magnesium	ug/L	+/−20	60700		61700		1.6		MS
Manganese	ug/L	+/−20	1370		1420		3.91		MS
Molybdenum	ug/L	+/−20	78.0		79.4		1.75		MS
Nickel	ug/L	+/−20	46.2		47.0		1.67		MS
Potassium	ug/L	+/−20	19800		20400		3.09		MS
Selenium	ug/L	+/−20	49.6		51.5		3.81		MS
Silver	ug/L	+/−20	48.7		49.5		1.52		MS
Sodium	ug/L	+/−20	113000		115000		2.2		MS
Thallium	ug/L	+/−20	46.5		47.1		1.17		MS
Thorium	ug/L	+/−20	51.7		52.4		1.25		MS
Uranium−235	ug/L	+/−20	0.389		0.385		1.08		MS
Uranium−238	ug/L	+/−20	52.8		53.8		1.84		MS
Vanadium	ug/L	+/−20	50.4		51.2		1.59		MS
Zinc	ug/L	+/−20	51.0		50.8		.524		MS

SW846

Metals
−6−
Duplicate Sample Summary

SDG No.: 540204 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA20−CMT3T(OW)−04052021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792941 **Duplicate ID:** 1204792942 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 540204

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204792940								
	Vanadium	ug/L	50.0	49.0		97.9	80−120	MS
	Zinc	ug/L	50.0	51.7		103	80−120	MS
	Aluminum	ug/L	2000	1970		98.7	80−120	MS
	Antimony	ug/L	50.0	50.6		101	80−120	MS
	Arsenic	ug/L	50.0	48.6		97.2	80−120	MS
	Barium	ug/L	50.0	50.8		102	80−120	MS
	Beryllium	ug/L	50.0	54.7		109	80−120	MS
	Cadmium	ug/L	50.0	51.4		103	80−120	MS
	Calcium	ug/L	2000	2260		113	80−120	MS
	Chromium	ug/L	50.0	49.1		98.2	80−120	MS
	Cobalt	ug/L	50.0	49.4		98.8	80−120	MS
	Copper	ug/L	50.0	49.6		99.2	80−120	MS
	Iron	ug/L	2000	1950		97.5	80−120	MS
	Lead	ug/L	50.0	50.9		102	80−120	MS
	Magnesium	ug/L	2000	2330		116	80−120	MS
	Manganese	ug/L	50.0	53.2		106	80−120	MS
	Molybdenum	ug/L	50.0	51.9		104	80−120	MS
	Nickel	ug/L	50.0	48.9		97.8	80−120	MS
	Potassium	ug/L	2000	1970		98.7	80−120	MS
	Selenium	ug/L	50.0	49.6		99.2	80−120	MS
	Silver	ug/L	50.0	52.2		104	80−120	MS
	Sodium	ug/L	2000	2320		116	80−120	MS
	Thallium	ug/L	50.0	48.3		96.6	80−120	MS
	Thorium	ug/L	50.0	49.8		99.6	80−120	MS
	Uranium−235	ug/L	0.360	0.344		95.5	80−120	MS
	Uranium−238	ug/L	49.6	48.0		96.8	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 540204 **Client ID** HA20−CMT3T(OW)−04052021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540204001 **Serial Dilution ID:** 1204792943

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	23.1	J	96.5	U	19.444			MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	216		218		.824		20	MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	21000		20400		2.846		20	MS
Chromium	3	U	15	U				MS
Cobalt	.464	J	1.5	U	2.371			MS
Copper	.607	J	1.5	U	15.321			MS
Iron	48.2	J	165	U	7.581			MS
Lead	.5	U	2.5	U				MS
Magnesium	5880		5780		1.7		20	MS
Manganese	135		131		2.885		20	MS
Molybdenum	21.6		20.1		6.833			MS
Nickel	.879	J	3	U	3.527			MS
Potassium	18000		17700		1.598		20	MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	11200		11200		.191		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.0292	J	.05	U	14.384			MS
Uranium−238	4.08		4.17		2.306			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.49	J	16.5	U	228.228			MS

SW846

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 540204 **Client ID** HA20−CMT3T(OW)−04052021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540204001 **Serial Dilution ID:** 1204792943

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 540204 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2113880							
1204792939	MB for batch 2113880	MB	G	12−APR−21	50mL	50mL	
1204792940	LCS for batch 2113880	LCS	G	12−APR−21	50mL	50mL	
1204792941	HA20−CMT3T(OW)−04052021S	MS	G	12−APR−21	50mL	50mL	
1204792942	HA20−CMT3T(OW)−04052021SD	MSD	G	12−APR−21	50mL	50mL	
540204001	HA20−CMT3T(OW)−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540204002	HA20−CMT3T(OW)−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540204003	GZW−9−2−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540204004	GZW−9−2−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540204005	MW−S15−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540204006	MW−S15−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540204007	MW−S60−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540204008	MW−S60−04052021	SAMPLE	G	12−APR−21	50mL	50mL	
540204009	EQ Blank1−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204010	EQ Blank1−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204011	MW−S29−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204012	MW−S29−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204013	HA20−CMT−6(OW)−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204014	HA20−CMT−6(OW)−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204015	MW−8A−04062021	SAMPLE	G	12−APR−21	50mL	50mL	

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 540204 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
540204016	MW−8A−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204017	MW−BS36−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204018	MW−BS36−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204019	HA20−CMT−5(OW)−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540204020	HA20−CMT−5(OW)−04062021	SAMPLE	G	12−APR−21	50mL	50mL	

SW846

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540204

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	10:02:42																							X	X		
S10	1	10:04:28																							X	X		
S100	1	10:06:15																							X	X		
ICV01	1	10:08:01																							X	X		
ICB01	1	10:09:49																							X	X		
CRDL01	1	10:11:36																							X	X		
ICSA01	1	10:13:24																							X	X		
ICSAB01	1	10:15:13																							X	X		
CCV01	1	10:17:01																							X	X		
CCB01	1	10:18:48																							X	X		
ZZZZZZ	1	10:31:34																										
ZZZZZZ	1	10:33:21																										
ZZZZZZ	1	10:35:07																										
ZZZZZZ	1	10:36:54																										
ZZZZZZ	1	10:38:41																										
ZZZZZZ	1	10:40:28																										
ZZZZZZ	5	10:42:15																										
CCV	1	10:44:03																							X	X		
CCB	1	10:45:51																							X	X		
ZZZZZZ	1	10:47:39																										
ZZZZZZ	1	10:49:26																										
ZZZZZZ	1	10:51:13																										
ZZZZZZ	1	10:53:00																										
ZZZZZZ	1	10:54:46																										
ZZZZZZ	1	10:56:33																										
CCV	1	10:58:20																							X	X		
CCB	1	11:00:08																							X	X		
ZZZZZZ	1	11:01:55																										
ZZZZZZ	1	11:03:42																										
ZZZZZZ	1	11:05:29																										
ZZZZZZ	1	11:07:17																										
ZZZZZZ	1	11:09:04																										
ZZZZZZ	1	11:10:51																										
ZZZZZZ	2	11:12:38																										
CCV	1	11:14:26																							X	X		
CCB	1	11:16:13																							X	X		
ZZZZZZ	1	11:18:01																										
ZZZZZZ	2	11:22:51																										
ZZZZZZ	2	11:24:37																										
ZZZZZZ	1	11:26:25																										
ZZZZZZ	1	11:28:11																										

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540204

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	11:29:58																										
ZZZZZZ	1	11:31:45																										
CCV02	1	11:33:32																							X	X		
CCB02	1	11:35:20																							X	X		
1204792939	1	11:37:07																							X	X		
1204792940	1	11:38:54																							X	X		
540204001	1	11:40:41																							X	X		
1204792941	1	11:42:28																							X	X		
1204792942	1	11:44:15																							X	X		
ZZZZZZ	1	11:46:01																										
1204792943	5	11:47:48																							X	X		
CCV03	1	11:49:35																							X	X		
CCB03	1	11:51:23																							X	X		
540204002	1	11:53:10																							X	X		
540204003	1	11:54:57																							X	X		
540204004	1	11:56:44																							X	X		
540204005	1	11:58:31																							X	X		
540204006	1	12:00:18																							X	X		
540204007	1	12:02:04																							X	X		
540204008	1	12:03:51																							X	X		
540204009	1	12:05:38																							X	X		
540204010	1	12:07:25																							X	X		
CCV04	1	12:09:12																							X	X		
CCB04	1	12:11:00																							X	X		
540204011	1	12:12:47																							X	X		
540204012	1	12:14:34																							X	X		
540204013	1	12:16:21																							X	X		
540204014	1	12:18:08																							X	X		
540204015	1	12:19:55																							X			
ZZZZZZ	2	12:21:42																										
CCV05	1	12:23:29																							X	X		
CCB05	1	12:25:17																							X	X		
540204016	1	12:27:04																							X			
ZZZZZZ	2	12:28:51																										
540204017	1	12:30:39																							X	X		
540204018	1	12:32:26																							X	X		
540204019	1	12:34:12																							X	X		
540204020	1	12:35:59																							X	X		
CCV06	1	12:37:47																							X	X		
CCB06	1	12:39:34																							X	X		

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540204

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540204

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	16:39:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	16:43:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	16:46:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	16:50:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	16:53:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	16:57:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	17:01:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	17:04:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	17:08:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	17:11:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	17:15:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	17:19:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	17:22:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	17:26:17																										
ZZZZZZ	1	17:29:54																										
ZZZZZZ	1	17:33:30																										
ZZZZZZ	1	17:37:07																										
ZZZZZZ	1	17:40:43																										
ZZZZZZ	1	17:44:20																										
ZZZZZZ	5	17:47:57																										
CCV	1	17:51:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	17:55:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	17:58:47																										
ZZZZZZ	1	18:02:24																										
ZZZZZZ	1	18:06:00																										
ZZZZZZ	1	18:09:37																										
ZZZZZZ	1	18:13:13																										
ZZZZZZ	1	18:16:50																										
ZZZZZZ	1	18:20:27																										
ZZZZZZ	1	18:24:03																										
CCV	1	18:27:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	18:31:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	18:34:56																										
ZZZZZZ	1	18:38:33																										
ZZZZZZ	1	18:42:09																										
ZZZZZZ	1	18:45:46																										
ZZZZZZ	1	18:49:23																										
ZZZZZZ	1	18:53:00																										
ZZZZZZ	1	18:56:36																										
ZZZZZZ	1	19:00:13																										
ZZZZZZ	1	19:03:50																										

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540204

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCV03	1	19:07:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	19:11:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204792939	1	19:14:44	X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X		X	X			X	X
1204792940	1	19:18:20	X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X		X	X			X	X
540204001	1	19:21:57	X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X		X	X			X	X
1204792941	1	19:25:34	X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X		X	X			X	X
1204792942	1	19:29:11	X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X		X	X			X	X
ZZZZZZ	1	19:32:48																										
1204792943	5	19:36:24	X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X		X	X			X	X
CCV04	1	19:40:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	19:43:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204002	1	19:47:18	X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X		X	X			X	X
540204003	1	19:50:55	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
540204004	1	19:54:32	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
540204005	1	19:58:08	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
540204006	1	20:01:45	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
540204007	1	20:05:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204008	1	20:08:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204009	1	20:12:35		X		X		X						X			X				X		X	X				
540204010	1	20:16:12		X		X		X						X			X				X		X	X				
CCV05	1	20:19:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	20:23:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204011	1	20:27:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204012	1	20:30:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204013	1	20:34:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204014	1	20:37:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204015	1	20:41:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204016	1	20:45:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204017	1	20:48:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X
540204018	1	20:52:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X
540204019	1	20:56:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540204020	1	20:59:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV06	1	21:03:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB06	1	21:06:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540204

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 03-MAY-21

End Date: 03-MAY-21

Data File: 210502-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	08:59:54																								X		
S10	1	09:01:40																								X		
S100	1	09:03:27																								X		
ICV01	1	09:05:14																								X		
ICB01	1	09:07:01																								X		
CRDL01	1	09:08:49																								X		
ICSA01	1	09:10:37																								X		
ICSAB01	1	09:12:25																								X		
CCV01	1	09:14:13																								X		
CCB01	1	09:16:00																								X		
ZZZZZZ	1	09:17:48																										
ZZZZZZ	1	09:19:34																										
ZZZZZZ	1	09:21:21																										
ZZZZZZ	1	09:23:44																										
ZZZZZZ	1	09:25:31																										
ZZZZZZ	1	09:27:18																										
ZZZZZZ	1	09:29:04																										
ZZZZZZ	1	09:30:51																										
ZZZZZZ	5	09:32:38																										
CCV	1	09:34:26																								X		
CCB	1	09:36:13																								X		
ZZZZZZ	1	09:38:01																										
ZZZZZZ	1	09:39:47																										
ZZZZZZ	1	09:41:34																										
ZZZZZZ	1	09:43:21																										
ZZZZZZ	1	09:45:08																										
ZZZZZZ	1	09:46:55																										
ZZZZZZ	1	09:48:42																										
ZZZZZZ	1	09:50:28																										
ZZZZZZ	1	09:52:15																										
CCV	1	09:54:02																								X		
CCB	1	09:55:50																								X		
ZZZZZZ	50	09:57:37																										
ZZZZZZ	50	09:59:24																										
ZZZZZZ	100	10:01:11																										
ZZZZZZ	100	10:02:58																										
ZZZZZZ	1	10:04:46																										
ZZZZZZ	1	10:06:33																										
ZZZZZZ	1	10:08:19																										
ZZZZZZ	1	10:10:06																										
CCV	1	10:11:54																								X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540204

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 03-MAY-21 **End Date:** 03-MAY-21 **Data File:** 210502-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB	1	10:13:41																								X		
ZZZZZZ	1	10:15:29																										
ZZZZZZ	1	10:17:16																										
ZZZZZZ	1	10:19:03																										
ZZZZZZ	1	10:20:50																										
ZZZZZZ	1	10:22:37																										
ZZZZZZ	1	10:24:24																										
CCV	1	10:26:11																								X		
CCB	1	10:27:58																								X		
ZZZZZZ	1	10:29:46																										
ZZZZZZ	1	10:31:32																										
ZZZZZZ	1	10:33:19																										
ZZZZZZ	1	10:35:06																										
ZZZZZZ	5	10:36:53																										
ZZZZZZ	1	10:38:40																										
ZZZZZZ	1	10:40:27																										
ZZZZZZ	1	10:42:13																										
ZZZZZZ	1	10:44:00																										
ZZZZZZ	5	10:45:47																										
CCV02	1	10:47:34																								X		
CCB02	1	10:49:22																								X		
ZZZZZZ	1	10:51:10																										
ZZZZZZ	1	10:52:57																										
ZZZZZZ	1	10:54:43																										
ZZZZZZ	1	10:57:07																										
540204015	5	10:58:54																								X		
540204016	5	11:00:41																								X		
CCV03	1	11:02:28																								X		
CCB03	1	11:04:16																								X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540204

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 03-MAY-21 **End Date:** 03-MAY-21 **Data File:** 210503-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	12:18:02							X						X	X						X						
S10	1	12:19:59							X						X	X						X						
S100	1	12:21:55							X						X	X						X						
ICV01	1	12:23:51							X						X	X						X						
ICB01	1	12:25:48							X						X	X						X						
CRDL01	1	12:27:45							X						X	X						X						
ICSA01	1	12:29:41							X						X	X						X						
ICSAB01	1	12:31:38							X						X	X						X						
CCV01	1	12:33:35							X						X	X						X						
CCB01	1	12:35:32							X						X	X						X						
LR01	1	12:37:29							X						X	X						X						
CCV02	1	12:39:26							X						X	X						X						
CCB02	1	12:41:23							X						X	X						X						
ZZZZZZ	1	12:43:20																										
ZZZZZZ	1	12:45:17																										
ZZZZZZ	10	12:47:14																										
ZZZZZZ	10	12:49:10																										
ZZZZZZ	10	12:51:07																										
ZZZZZZ	10	12:53:04																										
ZZZZZZ	10	12:55:00																										
ZZZZZZ	10	12:56:57																										
CCV03	1	12:58:54							X						X	X						X						
CCB03	1	13:00:51							X						X	X						X						
1204792939	1	13:02:47							X						X	X						X						
1204792940	1	13:04:44							X						X	X						X						
540204001	10	13:06:41							X						X	X						X						
1204792941	10	13:08:37							X						X	X						X						
1204792942	10	13:10:34							X						X	X						X						
1204792943	50	13:12:31							X						X	X						X						
CCV04	1	13:14:28							X						X	X						X						
CCB04	1	13:16:25							X						X	X						X						
540204002	10	13:18:22							X						X	X						X						
540204003	10	13:20:19														X												
540204004	10	13:22:16														X												
540204005	10	13:24:13														X						X						
540204006	10	13:26:09														X						X						
540204017	10	13:28:06																				X						
540204018	10	13:30:18																				X						
ZZZZZZ	10	13:32:16																										
ZZZZZZ	10	13:34:12																										
CCV05	1	13:36:11							X						X	X						X						

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540204

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 03-MAY-21 **End Date:** 03-MAY-21 **Data File:** 210503-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB05	1	13:38:07							X						X	X						X						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540204

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 04-MAY-21 **End Date:** 04-MAY-21 **Data File:** 210504-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	18:53:19	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
S10	1	18:56:56	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
S100	1	19:00:32	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
ICV01	1	19:04:09	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
ICB01	1	19:07:45	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CRDL01	1	19:11:21	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
ICSA01	1	19:14:57	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
ICSAB01	1	19:18:33	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCV01	1	19:22:09	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCB01	1	19:25:46	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
LR01	1	19:29:22	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCV02	1	19:33:00	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCB02	1	19:36:37	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
ZZZZZZ	1	19:40:14																										
ZZZZZZ	1	19:43:50																										
ZZZZZZ	1	19:47:27																										
ZZZZZZ	1	19:51:03																										
ZZZZZZ	1	19:54:40																										
ZZZZZZ	1	19:58:17																										
ZZZZZZ	1	20:01:53																										
ZZZZZZ	1	20:05:30																										
ZZZZZZ	5	20:09:07																										
CCV	1	20:12:44	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCB	1	20:16:21	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
ZZZZZZ	1	20:19:57																										
ZZZZZZ	1	20:23:34																										
ZZZZZZ	1	20:27:11																										
ZZZZZZ	1	20:30:47																										
ZZZZZZ	1	20:34:24																										
ZZZZZZ	1	20:38:00																										
ZZZZZZ	1	20:41:37																										
CCV	1	20:45:15	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCB	1	20:48:52	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
ZZZZZZ	1	20:52:30																										
ZZZZZZ	1	20:56:07																										
ZZZZZZ	1	20:59:44																										
ZZZZZZ	1	21:03:20																										
ZZZZZZ	1	21:06:57																										
ZZZZZZ	1	21:10:34																										
ZZZZZZ	5	21:14:11																										
CCV	1	21:17:49	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540204

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 04-MAY-21 **End Date:** 04-MAY-21 **Data File:** 210504-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB	1	21:21:25	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
ZZZZZZ	1	21:25:03																										
ZZZZZZ	1	21:28:40																										
ZZZZZZ	1	21:32:17																										
ZZZZZZ	1	21:35:54																										
ZZZZZZ	1	21:39:30																										
ZZZZZZ	1	21:43:07																										
ZZZZZZ	1	21:46:44																										
ZZZZZZ	1	21:50:20																										
ZZZZZZ	1	21:53:57																										
ZZZZZZ	1	21:57:34																										
CCV	1	22:01:12	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCB	1	22:04:49	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
ZZZZZZ	1	22:08:27																										
ZZZZZZ	1	22:12:04																										
ZZZZZZ	1	22:15:41																										
ZZZZZZ	1	22:19:17																										
ZZZZZZ	1	22:22:54																										
ZZZZZZ	1	22:26:31																										
ZZZZZZ	1	22:30:08																										
ZZZZZZ	1	22:33:44																										
ZZZZZZ	1	22:37:21																										
CCV03	1	22:40:59	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCB03	1	22:44:36	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
540204009	1	22:48:15	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
540204010	1	22:51:52	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCV04	1	22:55:30	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X
CCB04	1	22:59:07	X		X		X		X	X	X	X	X		X	X		X	X	X		X					X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 540204

Contract: DMAX00801 **Lab Code:** **GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 540204

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2113880**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204792940	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204792940	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204792941	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204792941	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204792942	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204792942	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	**Prep Date**	**Matrix**	**Initial Volume (mL)**	**Hot Block Stop Date (date)**	**Final Volume (mL)**	**Prep Factor (mL/mL)**	**pH Check**
1204792939 MB	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792940 LCS	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204001	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792943 SDILT (540204001)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792941 MS (540204001)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792942 MSD (540204001)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204002	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204003	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204004	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204005	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204006	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204007	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204008	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204009	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204010	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204011	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204012	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204013	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204014	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204015	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204016	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204017	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204018	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204019	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540204020	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2

Reagent/Solvent Lot ID	**Description**	**Amount**
3265774	HYDROCHLORIC ACID	2.5 mL
3279375	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 90 C
Temperature within limits (Y/N)?: y
Thermometer ID: 12411
Hot Block ID: 14
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 04, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 540208

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 09, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04062021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540208

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540208

May 04, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 09, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
540208001	HA20-CMT-5(OW)-04062021DUP
540208002	HA20-CMT-5(OW)-04062021DUP
540208003	MW-BS31-04062021
540208004	MW-BS31-04062021
540208005	MW-S17-04062021
540208006	MW-S17-04062021
540208007	MW-BS22-04062021
540208008	MW-BS22-04062021
540208009	MW-S22-04062021
540208010	MW-S22-04062021
540208011	MW-S28-04062021
540208012	MW-S28-04062021
540208013	MW-BS50-04062021
540208014	MW-BS50-04062021
540208015	HB-620-04062021
540208016	HB-620-04062021
540208017	HB-12-04062021
540208018	HB-12-04062021
540208019	MW-S39-04062021
540208020	MW-S39-04062021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Project # 3252H
GEL Quote #: GELP18-1125
COC Number (1): 04062021
PO Number:

GEL Laboratories LLC

gel.com

Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

540208

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) NI	Dissolved Metals (6020A ICP-MS) NI	U-235/U-238 plus Total U Calc. NI	Comments Note: extra sample is required for sample specific QC <-- Preservative Type (6)
H[illegible]0-CMT-5(OW)-04062021DUP	4/6/2021	11:15	FD	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
MW-BS31-04062021	4/6/2021	10:50	N	Y	GW	U238		2	X	X	X	
MW-S17-04062021	4/6/2021	11:35	N/MS/MSD	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
MW-BS22-04062021	4/6/2021	9:45	N	Y	GW	U238		2	X	X	X	
MW-S22-04062021	4/6/2021	12:10	N	Y	GW	U238		2	X	X	X	
MW-S28-04062021	4/6/2021	12:45	N/MS/MSD	Y	GW	U238		2	X	X	X	
MW-BS50-04062021	4/6/2021	13:05	N	Y	GW	U238		2	X	X	X	
HB-620-04062021	4/6/2021	13:50	N	Y	GW	U238		2	X	X	X	
HB-12-04062021	4/6/2021	14:10	N	Y	GW	U238		2	X	X	X	
MW-S39-04062021	4/6/2021	13:10	N	Y	GW	U238		2	X	X	X	

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/7/21	0830	1	[signature]	4/7/21	0830
2	[signature]	4/7/21	1500	2	[signature]	4 8 21	1010
3				3			

TAT Requested: Normal: X Rush: _____ Specify: _______

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact? [ ] Yes [ ] No* ***Cooler Temp:*** _____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via NAT. [initials]

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 540208
Received By: S L BOONE	Date Received: APRIL 9, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7733 7887 5412 5°c 7733 7887 5136 4°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:_______
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7733 7887 5397 4°c 7733 7887 5228 3°c

PM (or PMA) review: Initials (A) Date 4/12/21 Page 1 of 1

GL-CHL-SR-001 Rev 7

Work Order Containers

Sample ID: **540208001**
Client Sample ID: **HA20−CMT−5(OW)−04062021DUP**
Description: **Ground Water**

Label: 540208001.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208001.01.01 **Type: New Undefined**

01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208002**
Client Sample ID: **HA20−CMT−5(OW)−04062021DUP**
Description: **Dissolved Ground Water**

Label: 540208002.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208002.01.01 **Type: New Undefined**

01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208003**
Client Sample ID: **MW−BS31−04062021**
Description: **Ground Water**

Label: 540208003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to

Work Order Containers

Sample ID: **540208003**
Client Sample ID: **MW−BS31−04062021**
Description: **Ground Water**

Label:	**540208003.01**	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
	09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
	12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label:	**540208003.01.01**	**Type: New Undefined**	
	01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
	01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208004**
Client Sample ID: **MW−BS31−04062021**
Description: **Dissolved Ground Water**

Label:	**540208004.01**	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
	09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
	09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
	09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
	09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to
	09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
	12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label:	**540208004.01.01**	**Type: New Undefined**	
	01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
	01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208005**
Client Sample ID: **MW−S17−04062021**
Description: **Ground Water**

Label:	**540208005.01**	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
	09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
	09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
	09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
	09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to
	09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
	12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540208005**
Client Sample ID: **MW−S17−04062021**
Description: **Ground Water**

Label: 540208005.01.01 **Type: New Undefined**

01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208006**
Client Sample ID: **MW−S17−04062021**
Description: **Dissolved Ground Water**

Label: 540208006.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208006.01.01 **Type: New Undefined**

01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208007**
Client Sample ID: **MW−BS22−04062021**
Description: **Ground Water**

Label: 540208007.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208007.01.01 **Type: New Undefined**

01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: 540208008
Client Sample ID: MW−BS22−04062021
Description: Dissolved Ground Water

Label: 540208008.01 **Type:** Plastic 500 ml **Preservative:** Nitric pH<2

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208008.01.01 **Type:** New Undefined

01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540208009
Client Sample ID: MW−S22−04062021
Description: Ground Water

Label: 540208009.01 **Type:** Plastic 500 ml **Preservative:** Nitric pH<2

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208009.01.01 **Type:** New Undefined

01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540208010
Client Sample ID: MW−S22−04062021
Description: Dissolved Ground Water

Label: 540208010.01 **Type:** Plastic 500 ml **Preservative:** Nitric pH<2

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:57	Ridge Gleaton	Transfered custody to batch 2113889
09−APR−21 17:47:57	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113889 to

Work Order Containers

Sample ID: **540208010**
Client Sample ID: **MW−S22−04062021**
Description: **Dissolved Ground Water**

Label: 540208010.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208010.01.01 **Type: New Undefined**

01−MAY−21 09:16:58	Paul Boyd	Transfered custody to batch 2113890
01−MAY−21 09:16:58	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208011**
Client Sample ID: **MW−S28−04062021**
Description: **Ground Water**

Label: 540208011.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208011.01.01 **Type: New Undefined**

28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 540208011.01.02 **Type: New Undefined**

30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540208012**
Client Sample ID: **MW−S28−04062021**
Description: **Dissolved Ground Water**

Label: 540208012.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208012.01.01 **Type: New Undefined**

28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 540208012.01.02 **Type: New Undefined**

30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208013**
Client Sample ID: **MW−BS50−04062021**
Description: **Ground Water**

Label: 540208013.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep

Work Order Containers

Sample ID: **540208013**
Client Sample ID: **MW−BS50−04062021**
Description: **Ground Water**

Label: 540208013.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208013.01.01	**Type: New Undefined**	
28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 540208013.01.02	**Type: New Undefined**	
30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208014**
Client Sample ID: **MW−BS50−04062021**
Description: **Dissolved Ground Water**

Label: 540208014.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208014.01.01	**Type: New Undefined**	
28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 540208014.01.02	**Type: New Undefined**	
30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540208015**
Client Sample ID: **HB−620−04062021**
Description: **Ground Water**

Label: 540208015.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208015.01.01 **Type: New Undefined**

28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 540208015.01.02 **Type: New Undefined**

30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208016**
Client Sample ID: **HB−620−04062021**
Description: **Dissolved Ground Water**

Label: 540208016.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep

Work Order Containers

Sample ID: **540208016**
Client Sample ID: **HB−620−04062021**
Description: **Dissolved Ground Water**

Label: 540208016.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208016.01.01 | **Type: New Undefined**

28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 540208016.01.02 | **Type: New Undefined**

30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208017**
Client Sample ID: **HB−12−04062021**
Description: **Ground Water**

Label: 540208017.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208017.01.01 | **Type: New Undefined**

28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 540208017.01.02 | **Type: New Undefined**

30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540208018**
Client Sample ID: **HB−12−04062021**
Description: **Dissolved Ground Water**

Label: 540208018.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540208018.01.01 **Type: New Undefined**

28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 540208018.01.02 **Type: New Undefined**

30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208019**
Client Sample ID: **MW−S39−04062021**
Description: **Ground Water**

Label: 540208019.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep

Work Order Containers

Sample ID: **540208019**
Client Sample ID: **MW−S39−04062021**
Description: **Ground Water**

Label: 540208019.01		**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
	29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
	29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
	29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540208019.01.01		**Type: New Undefined**	
	28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
	28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab
Label: 540208019.01.02		**Type: New Undefined**	
	30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
	30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540208020**
Client Sample ID: **MW−S39−04062021**
Description: **Dissolved Ground Water**

Label: 540208020.01		**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
	09−APR−21 14:45:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
	09−APR−21 17:47:11	Ridge Gleaton	Transfered custody to batch 2113891
	09−APR−21 17:47:11	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
	09−APR−21 23:21:56	Ridge Gleaton	Changed batch_id from 2113891 to
	09−APR−21 23:21:56	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
	12−APR−21 10:55:53	Michelle Sterner	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
	29−APR−21 12:56:21	Stephen Michaels	Transfered custody to batch 2121478
	29−APR−21 12:56:21	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
	29−APR−21 14:51:31	Stephen Michaels	Changed batch_id from 2121478 to
	29−APR−21 14:51:31	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
	29−APR−21 15:24:17	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540208020.01.01		**Type: New Undefined**	
	28−APR−21 17:07:52	Paul Boyd	Transfered custody to batch 2113892
	28−APR−21 17:07:52	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab
Label: 540208020.01.02		**Type: New Undefined**	
	30−APR−21 08:46:06	Samantha Jacobs	Transfered custody to batch 2121480
	30−APR−21 08:46:06	Samantha Jacobs	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 04 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 540208

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batches:</u> 2113890, 2113892 and 2121480

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2123483

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batches:</u> 2113889, 2113891 and 2121478

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
540208001	HA20-CMT-5(OW)-04062021DUP
540208002	HA20-CMT-5(OW)-04062021DUP
540208003	MW-BS31-04062021
540208004	MW-BS31-04062021
540208005	MW-S17-04062021
540208006	MW-S17-04062021
540208007	MW-BS22-04062021
540208008	MW-BS22-04062021
540208009	MW-S22-04062021
540208010	MW-S22-04062021
540208011	MW-S28-04062021
540208012	MW-S28-04062021
540208013	MW-BS50-04062021
540208014	MW-BS50-04062021
540208015	HB-620-04062021
540208016	HB-620-04062021
540208017	HB-12-04062021
540208018	HB-12-04062021
540208019	MW-S39-04062021
540208020	MW-S39-04062021
1204792949	Method Blank (MB)**ICP-MS**
1204792957	Method Blank (MB)**ICP-MS**
1204808623	Method Blank (MB)**ICP-MS**
1204792950	Laboratory Control Sample (LCS)
1204792958	Laboratory Control Sample (LCS)
1204808624	Laboratory Control Sample (LCS)
1204792953	540208005(MW-S17-04062021L) Serial Dilution (SD)
1204792956	540208006(MW-S17-04062021L) Serial Dilution (SD)

1204792961	540208011(MW-S28-04062021L) Serial Dilution (SD)
1204792964	540208012(MW-S28-04062021L) Serial Dilution (SD)
1204808627	540208011(MW-S28-04062021L) Serial Dilution (SD)
1204808630	540208012(MW-S28-04062021L) Serial Dilution (SD)
1204792951	540208005(MW-S17-04062021S) Matrix Spike (MS)
1204792954	540208006(MW-S17-04062021S) Matrix Spike (MS)
1204792959	540208011(MW-S28-04062021S) Matrix Spike (MS)
1204792962	540208012(MW-S28-04062021S) Matrix Spike (MS)
1204808625	540208011(MW-S28-04062021S) Matrix Spike (MS)
1204808628	540208012(MW-S28-04062021S) Matrix Spike (MS)
1204792952	540208005(MW-S17-04062021SD) Matrix Spike Duplicate (MSD)
1204792955	540208006(MW-S17-04062021SD) Matrix Spike Duplicate (MSD)
1204792960	540208011(MW-S28-04062021SD) Matrix Spike Duplicate (MSD)
1204792963	540208012(MW-S28-04062021SD) Matrix Spike Duplicate (MSD)
1204808626	540208011(MW-S28-04062021SD) Matrix Spike Duplicate (MSD)
1204808629	540208012(MW-S28-04062021SD) Matrix Spike Duplicate (MSD)
1204807972	540208011(MW-S28-04062021PS) Post Spike (PS)

Samples 540208001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement
The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recovery may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204792960 (MW-S28-04062021MSD)	Calcium	127* (75%-125%)

Technical Information

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 540208007 (MW-BS22-04062021), 540208017 (HB-12-04062021) and 540208018 (HB-12-04062021)-ICP-MS were diluted to ensure that the analyte concentrations

were within the linear calibration range of the instrument.

Analyte	540208		
	007	**017**	**018**
Calcium	10X	1X	1X
Uranium-235	1X	2X	2X
Uranium-238	1X	10X	10X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 540208 GEL Work Order: 540208

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

** Indicates analyte is a surrogate compound.

J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

U Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Edmund Frampton**

Date: 04 MAY 2021 **Title: Team Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208001 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: HA20-CMT-5(OW)-040620 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	411	ug/L		19.3	50.0	50.0	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-39-3	Barium	35.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-70-2	Calcium	41600	ug/L	N	80.0	200	200	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-48-4	Cobalt	0.926	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-50-8	Copper	0.510	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7439-89-6	Iron	491	ug/L		33.0	100	100	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7439-95-4	Magnesium	9590	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:03	210502-8	2113890
7439-96-5	Manganese	531	ug/L		1.00	5.00	5.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7439-98-7	Molybdenum	2.47	ug/L		0.200	1.00	1.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-02-0	Nickel	1.18	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-09-7	Potassium	6870	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:03	210502-8	2113890
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-23-5	Sodium	11600	ug/L		80.0	250	250	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-61-1	Total Uranium	5.72	ug/L		0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117-96-1	Uranium-235	0.0429	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:19	210502-9	2113890
7440-61-1	Uranium-238	5.67	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:19	210502-9	2113890
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 14:22	210501-6	2113890
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 14:22	210501-6	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208002 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: HA20−CMT−5(OW)−040620 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	41.4	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−39−3	Barium	32.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−70−2	Calcium	43200	ug/L	N	80.0	200	200	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−48−4	Cobalt	0.715	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7439−89−6	Iron	118	ug/L		33.0	100	100	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7439−95−4	Magnesium	9210	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:05	210502−8	2113890
7439−96−5	Manganese	514	ug/L		1.00	5.00	5.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7439−98−7	Molybdenum	2.35	ug/L		0.200	1.00	1.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−02−0	Nickel	1.16	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−09−7	Potassium	6750	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:05	210502−8	2113890
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−23−5	Sodium	12000	ug/L		80.0	250	250	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−61−1	Total Uranium	5.53	ug/L		0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0407	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:20	210502−9	2113890
7440−61−1	Uranium−238	5.49	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:20	210502−9	2113890
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 14:25	210501−6	2113890
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 14:25	210501−6	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208003 **BASIS:** As Received **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−BS31−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/01/21 16:57	210501−7	2113890
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 16:57	210501−7	2113890
7440−39−3	Barium	37.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 16:57	210501−7	2113890
7440−70−2	Calcium	38700	ug/L	N	80.0	200	200	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7439−89−6	Iron	425	ug/L		33.0	100	100	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7439−95−4	Magnesium	31900	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:07	210502−8	2113890
7439−96−5	Manganese	160	ug/L		1.00	5.00	5.00	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7439−98−7	Molybdenum	0.880	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/01/21 16:57	210501−7	2113890
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−09−7	Potassium	13600	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:07	210502−8	2113890
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 16:57	210501−7	2113890
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 16:57	210501−7	2113890
7440−23−5	Sodium	26700	ug/L		80.0	250	250	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−61−1	Total Uranium	0.0874	ug/L	J	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:22	210502−9	2113890
7440−61−1	Uranium−238	0.0874	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:22	210502−9	2113890
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 14:29	210501−6	2113890
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 16:57	210501−7	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208004 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−BS31−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−39−3	Barium	36.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−70−2	Calcium	39400	ug/L	N	80.0	200	200	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7439−89−6	Iron	360	ug/L		33.0	100	100	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7439−95−4	Magnesium	30400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:09	210502−8	2113890
7439−96−5	Manganese	190	ug/L		1.00	5.00	5.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7439−98−7	Molybdenum	0.760	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−09−7	Potassium	13100	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:09	210502−8	2113890
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−23−5	Sodium	26000	ug/L		80.0	250	250	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−61−1	Total Uranium	0.0672	ug/L	J	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:24	210502−9	2113890
7440−61−1	Uranium−238	0.0672	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:24	210502−9	2113890
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 14:32	210501−6	2113890
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 14:32	210501−6	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208005 **BASIS:** As Received **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−S17−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−36−0	Antimony	1.84	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−39−3	Barium	19.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−70−2	Calcium	19400	ug/L	N	80.0	200	200	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7439−95−4	Magnesium	5450	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:15	210502−8	2113890
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7439−98−7	Molybdenum	0.268	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−02−0	Nickel	0.837	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−09−7	Potassium	3300	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:15	210502−8	2113890
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−23−5	Sodium	22700	ug/L		80.0	250	250	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−61−1	Total Uranium	0.420	ug/L		0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:29	210502−9	2113890
7440−61−1	Uranium−238	0.420	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:29	210502−9	2113890
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 14:43	210501−6	2113890
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 14:43	210501−6	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208006 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−S17−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−36−0	Antimony	1.99	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−39−3	Barium	20.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−70−2	Calcium	20200	ug/L	N	80.0	200	200	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−50−8	Copper	0.338	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7439−95−4	Magnesium	5610	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:25	210502−8	2113890
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7439−98−7	Molybdenum	0.262	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−02−0	Nickel	0.864	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−09−7	Potassium	3360	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:25	210502−8	2113890
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−23−5	Sodium	23900	ug/L		80.0	250	250	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−61−1	Total Uranium	0.345	ug/L		0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:38	210502−9	2113890
7440−61−1	Uranium−238	0.345	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:38	210502−9	2113890
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:01	210501−6	2113890
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:01	210501−6	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208007 **BASIS:** As Received **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−BS22−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	30.3	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−38−2	Arsenic	2.74	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−39−3	Barium	24.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−70−2	Calcium	49600	ug/L	N	800	2000	2000	10	MS	PRB	05/02/21 14:41	210502−8	2113890
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−50−8	Copper	1.00	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7439−89−6	Iron	52.7	ug/L	J	33.0	100	100	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7439−95−4	Magnesium	9920	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:39	210502−8	2113890
7439−96−5	Manganese	3.02	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7439−98−7	Molybdenum	0.458	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−09−7	Potassium	4370	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:39	210502−8	2113890
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−23−5	Sodium	8120	ug/L		80.0	250	250	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−61−1	Total Uranium	10.6	ug/L		0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0772	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:51	210502−9	2113890
7440−61−1	Uranium−238	10.6	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:51	210502−9	2113890
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:27	210501−6	2113890
7440−66−6	Zinc	6.61	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:27	210501−6	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208008 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−BS22−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−38−2	Arsenic	2.76	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−39−3	Barium	21.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−70−2	Calcium	47300	ug/L	N	80.0	200	200	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−50−8	Copper	0.531	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7439−95−4	Magnesium	9860	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:43	210502−8	2113890
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7439−98−7	Molybdenum	0.424	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−09−7	Potassium	4390	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:43	210502−8	2113890
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−23−5	Sodium	7980	ug/L		80.0	250	250	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−61−1	Total Uranium	10.9	ug/L		0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0808	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:52	210502−9	2113890
7440−61−1	Uranium−238	10.8	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:52	210502−9	2113890
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:30	210501−6	2113890
7440−66−6	Zinc	3.36	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:30	210501−6	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208009 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: MW-S22-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	365	ug/L		19.3	50.0	50.0	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-39-3	Barium	17.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-70-2	Calcium	8350	ug/L	N	80.0	200	200	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-48-4	Cobalt	1.22	ug/L		0.300	1.00	1.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-50-8	Copper	1.06	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7439-89-6	Iron	421	ug/L		33.0	100	100	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7439-95-4	Magnesium	1850	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:45	210502-8	2113890
7439-96-5	Manganese	22.8	ug/L		1.00	5.00	5.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-02-0	Nickel	1.68	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-09-7	Potassium	4490	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:45	210502-8	2113890
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-23-5	Sodium	41300	ug/L		80.0	250	250	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-61-1	Total Uranium	0.140	ug/L	J	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:54	210502-9	2113890
7440-61-1	Uranium-238	0.140	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:54	210502-9	2113890
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:34	210501-6	2113890
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:34	210501-6	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208010 **BASIS:** Filtered **DATE COLLECTED** 06-APR-21

CLIENT ID: MW-S22-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-39-3	Barium	14.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-70-2	Calcium	8490	ug/L	N	80.0	200	200	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-48-4	Cobalt	0.482	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-50-8	Copper	1.24	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7439-95-4	Magnesium	1770	ug/L		10.0	30.0	30.0	1	MS	PRB	05/02/21 14:47	210502-8	2113890
7439-96-5	Manganese	3.84	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-02-0	Nickel	1.43	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-09-7	Potassium	4540	ug/L		80.0	300	300	1	MS	PRB	05/02/21 14:47	210502-8	2113890
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-23-5	Sodium	42500	ug/L		80.0	250	250	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/03/21 10:57	210502-9	2113890
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/03/21 10:57	210502-9	2113890
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:38	210501-6	2113890
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/01/21 15:38	210501-6	2113890

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113890	2113889	SW846 3005A	50	mL	50	mL	04/12/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208011 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: MW-S28-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-39-3	Barium	5.38	ug/L		0.670	4.00	4.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-70-2	Calcium	6660	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-48-4	Cobalt	3.92	ug/L		0.300	1.00	1.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	SKJ	04/30/21 10:22	210430-10	2121480
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7439-95-4	Magnesium	1310	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7439-96-5	Manganese	1.13	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7439-98-7	Molybdenum	0.230	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-02-0	Nickel	1.12	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-09-7	Potassium	1730	ug/L		80.0	300	300	1	MS	PRB	04/29/21 05:00	210428-4	2113892
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-23-5	Sodium	8870	ug/L		80.0	250	250	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/28/21 17:52	210428-1	2113892
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/28/21 17:52	210428-1	2113892
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 22:09	210428-2	2113892
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 22:09	210428-2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS

−1−

INORGANICS ANALYSIS DATA PACKAGE

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208012 **BASIS:** Filtered **DATE COLLECTED** 06-APR-21

CLIENT ID: MW-S28-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-39-3	Barium	5.22	ug/L		0.670	4.00	4.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-70-2	Calcium	7020	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-48-4	Cobalt	3.77	ug/L		0.300	1.00	1.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-50-8	Copper	0.665	ug/L	J	0.300	2.00	2.00	1	MS	SKJ	04/30/21 10:42	210430-10	2121480
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7439-95-4	Magnesium	1400	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7439-96-5	Manganese	2.34	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-02-0	Nickel	2.17	ug/L		0.600	2.00	2.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-09-7	Potassium	1680	ug/L		80.0	300	300	1	MS	PRB	04/29/21 05:17	210428-4	2113892
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-23-5	Sodium	8620	ug/L		80.0	250	250	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/28/21 18:01	210428-1	2113892
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/28/21 18:01	210428-1	2113892
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 22:27	210428-2	2113892
7440-66-6	Zinc	5.48	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/28/21 22:27	210428-2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208013 **BASIS:** As Received **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−BS50−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	493	ug/L		19.3	50.0	50.0	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−38−2	Arsenic	3.59	ug/L	J	2.00	5.00	5.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−39−3	Barium	6.14	ug/L		0.670	4.00	4.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−70−2	Calcium	23300	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−47−3	Chromium	9.22	ug/L	J	3.00	10.0	10.0	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−48−4	Cobalt	0.705	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−50−8	Copper	3.30	ug/L		0.300	2.00	2.00	1	MS	SKJ	04/30/21 10:52	210430−10	2121480
7439−89−6	Iron	550	ug/L		33.0	100	100	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7439−92−1	Lead	0.517	ug/L	J	0.500	2.00	2.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7439−95−4	Magnesium	6020	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7439−96−5	Manganese	209	ug/L		1.00	5.00	5.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7439−98−7	Molybdenum	4.72	ug/L		0.200	1.00	1.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−02−0	Nickel	1.65	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−09−7	Potassium	3510	ug/L		80.0	300	300	1	MS	PRB	04/29/21 05:42	210428−4	2113892
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−23−5	Sodium	9180	ug/L		80.0	250	250	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−61−1	Total Uranium	5.53	ug/L		0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0392	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/28/21 18:13	210428−1	2113892
7440−61−1	Uranium−238	5.49	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/28/21 18:13	210428−1	2113892
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 22:52	210428−2	2113892
7440−66−6	Zinc	3.64	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/28/21 22:52	210428−2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208014 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−BS50−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−38−2	Arsenic	3.38	ug/L	J	2.00	5.00	5.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−39−3	Barium	3.47	ug/L	J	0.670	4.00	4.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−70−2	Calcium	23100	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	SKJ	04/30/21 10:55	210430−10	2121480
7439−89−6	Iron	38.8	ug/L	J	33.0	100	100	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7439−95−4	Magnesium	5910	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7439−96−5	Manganese	33.8	ug/L		1.00	5.00	5.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7439−98−7	Molybdenum	5.59	ug/L		0.200	1.00	1.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−09−7	Potassium	3420	ug/L		80.0	300	300	1	MS	PRB	04/29/21 05:46	210428−4	2113892
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−23−5	Sodium	9210	ug/L		80.0	250	250	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−61−1	Total Uranium	5.39	ug/L		0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0397	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/28/21 18:15	210428−1	2113892
7440−61−1	Uranium−238	5.35	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/28/21 18:15	210428−1	2113892
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 22:56	210428−2	2113892
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 22:56	210428−2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208015 **BASIS:** As Received **DATE COLLECTED** 06−APR−21

CLIENT ID: HB−620−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	78.2	ug/L		19.3	50.0	50.0	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−39−3	Barium	13.7	ug/L		0.670	4.00	4.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−70−2	Calcium	15500	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−50−8	Copper	0.302	ug/L	J	0.300	2.00	2.00	1	MS	SKJ	04/30/21 11:01	210430−10	2121480
7439−89−6	Iron	85.6	ug/L	J	33.0	100	100	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7439−95−4	Magnesium	3630	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7439−96−5	Manganese	2.10	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7439−98−7	Molybdenum	2.27	ug/L		0.200	1.00	1.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−02−0	Nickel	0.659	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−09−7	Potassium	2650	ug/L		80.0	300	300	1	MS	PRB	04/29/21 05:49	210428−4	2113892
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−23−5	Sodium	18100	ug/L		80.0	250	250	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−61−1	Total Uranium	0.112	ug/L	J	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/28/21 18:17	210428−1	2113892
7440−61−1	Uranium−238	0.112	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/28/21 18:17	210428−1	2113892
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:00	210428−2	2113892
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:00	210428−2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS

−1−

INORGANICS ANALYSIS DATA PACKAGE

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208016 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: HB−620−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−39−3	Barium	13.1	ug/L		0.670	4.00	4.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−70−2	Calcium	15700	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−50−8	Copper	0.866	ug/L	J	0.300	2.00	2.00	1	MS	SKJ	04/30/21 11:03	210430−10	2121480
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7439−95−4	Magnesium	3580	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7439−98−7	Molybdenum	2.19	ug/L		0.200	1.00	1.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−02−0	Nickel	0.822	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−09−7	Potassium	2560	ug/L		80.0	300	300	1	MS	PRB	04/29/21 05:53	210428−4	2113892
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−23−5	Sodium	17500	ug/L		80.0	250	250	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/28/21 18:19	210428−1	2113892
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/28/21 18:19	210428−1	2113892
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:03	210428−2	2113892
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:03	210428−2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS

−1−

INORGANICS ANALYSIS DATA PACKAGE

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208017 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: HB-12-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-39-3	Barium	3.71	ug/L	J	0.670	4.00	4.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-70-2	Calcium	16500	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-48-4	Cobalt	0.499	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-50-8	Copper	4.72	ug/L		0.300	2.00	2.00	1	MS	SKJ	04/30/21 11:05	210430-10	2121480
7439-89-6	Iron	33.1	ug/L	J	33.0	100	100	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7439-95-4	Magnesium	4720	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7439-96-5	Manganese	5.73	ug/L		1.00	5.00	5.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7439-98-7	Molybdenum	64.9	ug/L		0.200	1.00	1.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-02-0	Nickel	1.29	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-09-7	Potassium	2640	ug/L		80.0	300	300	1	MS	PRB	04/29/21 05:56	210428-4	2113892
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-23-5	Sodium	21000	ug/L		80.0	250	250	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-61-1	Total Uranium	387	ug/L		0.670	2.00	2.00			JJ2	05/04/21 15:47		2123483
15117-96-1	Uranium-235	0.836	ug/L		0.0200	0.140	0.140	2	MS	PRB	04/29/21 10:14	210429-5	2113892
7440-61-1	Uranium-238	387	ug/L		0.670	2.00	2.00	10	MS	PRB	04/29/21 10:16	210429-5	2113892
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:07	210428-2	2113892
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:07	210428-2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS

−1−

INORGANICS ANALYSIS DATA PACKAGE

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208018 **BASIS:** Filtered **DATE COLLECTED** 06-APR-21

CLIENT ID: HB-12-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-39-3	Barium	3.96	ug/L	J	0.670	4.00	4.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-70-2	Calcium	16200	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-48-4	Cobalt	0.487	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-50-8	Copper	6.70	ug/L		0.300	2.00	2.00	1	MS	SKJ	04/30/21 11:08	210430-10	2121480
7439-89-6	Iron	138	ug/L		33.0	100	100	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7439-95-4	Magnesium	4630	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7439-96-5	Manganese	6.01	ug/L		1.00	5.00	5.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7439-98-7	Molybdenum	63.7	ug/L		0.200	1.00	1.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-02-0	Nickel	1.31	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-09-7	Potassium	2550	ug/L		80.0	300	300	1	MS	PRB	04/29/21 06:00	210428-4	2113892
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-23-5	Sodium	20400	ug/L		80.0	250	250	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-61-1	Total Uranium	443	ug/L		0.670	2.00	2.00			JJ2	05/04/21 15:47		2123483
15117-96-1	Uranium-235	0.935	ug/L		0.0200	0.140	0.140	2	MS	PRB	04/29/21 10:17	210429-5	2113892
7440-61-1	Uranium-238	442	ug/L		0.670	2.00	2.00	10	MS	PRB	04/29/21 10:19	210429-5	2113892
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:10	210428-2	2113892
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:10	210428-2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208019 **BASIS:** As Received **DATE COLLECTED** 06-APR-21

CLIENT ID: MW-S39-04062021 **LEVEL:** Low **DATE RECEIVED** 09-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	82.9	ug/L		19.3	50.0	50.0	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-39-3	Barium	20.4	ug/L		0.670	4.00	4.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-70-2	Calcium	15700	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-48-4	Cobalt	1.89	ug/L		0.300	1.00	1.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-50-8	Copper	0.392	ug/L	J	0.300	2.00	2.00	1	MS	SKJ	04/30/21 11:10	210430-10	2121480
7439-89-6	Iron	108	ug/L		33.0	100	100	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7439-95-4	Magnesium	2710	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7439-96-5	Manganese	2.84	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7439-98-7	Molybdenum	0.663	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-02-0	Nickel	2.73	ug/L		0.600	2.00	2.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-09-7	Potassium	4480	ug/L		80.0	300	300	1	MS	PRB	04/29/21 06:03	210428-4	2113892
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-23-5	Sodium	46100	ug/L		80.0	250	250	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-61-1	Total Uranium	0.181	ug/L	J	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/28/21 18:24	210428-1	2113892
7440-61-1	Uranium-238	0.181	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/28/21 18:24	210428-1	2113892
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:14	210428-2	2113892
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:14	210428-2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS

−1−

INORGANICS ANALYSIS DATA PACKAGE

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540208 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540208020 **BASIS:** Filtered **DATE COLLECTED** 06−APR−21

CLIENT ID: MW−S39−04062021 **LEVEL:** Low **DATE RECEIVED** 09−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−39−3	Barium	19.8	ug/L		0.670	4.00	4.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−70−2	Calcium	15400	ug/L	N	80.0	200	200	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−48−4	Cobalt	1.85	ug/L		0.300	1.00	1.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−50−8	Copper	0.821	ug/L	J	0.300	2.00	2.00	1	MS	SKJ	04/30/21 11:12	210430−10	2121480
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7439−95−4	Magnesium	2710	ug/L		10.0	30.0	30.0	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7439−98−7	Molybdenum	0.302	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−02−0	Nickel	1.73	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−09−7	Potassium	4610	ug/L		80.0	300	300	1	MS	PRB	04/29/21 06:07	210428−4	2113892
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−23−5	Sodium	46500	ug/L		80.0	250	250	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−61−1	Total Uranium	0.0907	ug/L	J	0.0670	0.200	0.200			JJ2	05/04/21 15:47		2123483
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/28/21 18:26	210428−1	2113892
7440−61−1	Uranium−238	0.0907	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/28/21 18:26	210428−1	2113892
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:18	210428−2	2113892
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/28/21 23:18	210428−2	2113892

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2113892	2113891	SW846 3005A	50	mL	50	mL	04/12/21	SM1
2121480	2121478	SW846 3005A	50	mL	50	mL	04/29/21	HH1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	101.4	90.0 − 110.0	MS	28−APR−21 17:32	210428−1
	Uranium−238	49.8	ug/L	49.64	ug/L	100.3	90.0 − 110.0	MS	28−APR−21 17:32	210428−1
	Aluminum	5280	ug/L	5050	ug/L	104.6	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Antimony	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Arsenic	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Barium	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Beryllium	52.2	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Cadmium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Calcium	5210	ug/L	5000	ug/L	104.2	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Chromium	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Cobalt	52.2	ug/L	50	ug/L	104.5	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Iron	5130	ug/L	5000	ug/L	102.5	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Lead	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Magnesium	5230	ug/L	5000	ug/L	104.6	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Manganese	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Molybdenum	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Nickel	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Selenium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Silver	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Sodium	5190	ug/L	5000	ug/L	103.7	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Thallium	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Thorium	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Vanadium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Zinc	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	28−APR−21 19:45	210428−2
	Potassium	5290	ug/L	5000	ug/L	105.8	90.0 − 110.0	MS	29−APR−21 04:10	210428−4
	Uranium−235	0.36	ug/L	0.36	ug/L	100.1	90.0 − 110.0	MS	29−APR−21 09:46	210429−5
	Uranium−238	49.3	ug/L	49.64	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 09:46	210429−5
	Copper	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 09:21	210430−10
	Aluminum	5310	ug/L	5050	ug/L	105.1	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Antimony	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Arsenic	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Beryllium	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Cadmium	52.3	ug/L	50	ug/L	104.5	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Calcium	5160	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Chromium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Cobalt	52.7	ug/L	50	ug/L	105.4	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Copper	52.8	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Iron	5250	ug/L	5000	ug/L	104.9	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Lead	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Manganese	53.2	ug/L	50	ug/L	106.4	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Molybdenum	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Nickel	52.3	ug/L	50	ug/L	104.5	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Selenium	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Silver	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Sodium	5220	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Thallium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Thorium	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Vanadium	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Zinc	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	01−MAY−21 11:50	210501−6
	Antimony	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	01−MAY−21 16:07	210501−7
	Arsenic	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	01−MAY−21 16:07	210501−7
	Cadmium	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	01−MAY−21 16:07	210501−7
	Molybdenum	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	01−MAY−21 16:07	210501−7
	Selenium	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	01−MAY−21 16:07	210501−7
	Silver	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	01−MAY−21 16:07	210501−7
	Zinc	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	01−MAY−21 16:07	210501−7
	Calcium	5030	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	02−MAY−21 12:18	210502−8
	Magnesium	5400	ug/L	5000	ug/L	108	90.0 − 110.0	MS	02−MAY−21 12:18	210502−8
	Potassium	5430	ug/L	5000	ug/L	108.6	90.0 − 110.0	MS	02−MAY−21 12:18	210502−8
	Uranium−235	0.38	ug/L	0.36	ug/L	104.3	90.0 − 110.0	MS	03−MAY−21 09:05	210502−9
	Uranium−238	50	ug/L	49.64	ug/L	100.7	90.0 − 110.0	MS	03−MAY−21 09:05	210502−9

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV01										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.3	90.0 − 110.0	MS	28−APR−21 17:41	210428−1
	Uranium−238	50.5	ug/L	49.64	ug/L	101.7	90.0 − 110.0	MS	28−APR−21 17:41	210428−1
	Aluminum	5200	ug/L	5050	ug/L	103	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Antimony	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Barium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Beryllium	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Cadmium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Calcium	5130	ug/L	5000	ug/L	102.5	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Chromium	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Cobalt	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Iron	5140	ug/L	5000	ug/L	102.8	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Lead	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Magnesium	5160	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Manganese	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Molybdenum	52	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Nickel	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Selenium	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Silver	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Sodium	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Thallium	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Thorium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Vanadium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Zinc	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	28−APR−21 20:03	210428−2
	Potassium	5320	ug/L	5000	ug/L	106.4	90.0 − 110.0	MS	29−APR−21 04:28	210428−4
	Uranium−235	0.36	ug/L	0.36	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 09:54	210429−5
	Uranium−238	49.6	ug/L	49.64	ug/L	100	90.0 − 110.0	MS	29−APR−21 09:54	210429−5
	Copper	52.9	ug/L	50	ug/L	105.8	90.0 − 110.0	MS	30−APR−21 09:32	210430−10
	Aluminum	5150	ug/L	5050	ug/L	102	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Antimony	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Arsenic	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Beryllium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Cadmium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Chromium	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Cobalt	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Copper	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Iron	5100	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Lead	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Manganese	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Molybdenum	52.2	ug/L	50	ug/L	104.5	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Nickel	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Selenium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Silver	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Sodium	5170	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Thallium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Thorium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Vanadium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Zinc	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	01−MAY−21 12:08	210501−6
	Antimony	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	01−MAY−21 16:25	210501−7
	Arsenic	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	01−MAY−21 16:25	210501−7
	Cadmium	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	01−MAY−21 16:25	210501−7
	Molybdenum	52.9	ug/L	50	ug/L	105.8	90.0 − 110.0	MS	01−MAY−21 16:25	210501−7
	Selenium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	01−MAY−21 16:25	210501−7
	Silver	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	01−MAY−21 16:25	210501−7
	Zinc	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	01−MAY−21 16:25	210501−7
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	02−MAY−21 12:28	210502−8
	Magnesium	5360	ug/L	5000	ug/L	107.2	90.0 − 110.0	MS	02−MAY−21 12:28	210502−8
	Potassium	5280	ug/L	5000	ug/L	105.7	90.0 − 110.0	MS	02−MAY−21 12:28	210502−8
	Uranium−235	0.37	ug/L	0.36	ug/L	102.3	90.0 − 110.0	MS	03−MAY−21 09:14	210502−9
	Uranium−238	51	ug/L	49.64	ug/L	102.7	90.0 − 110.0	MS	03−MAY−21 09:14	210502−9

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV02										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.9	90.0 − 110.0	MS	28−APR−21 17:49	210428−1
	Uranium−238	49.9	ug/L	49.64	ug/L	100.6	90.0 − 110.0	MS	28−APR−21 17:49	210428−1
	Aluminum	5050	ug/L	5050	ug/L	99.9	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Antimony	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Arsenic	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Barium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Beryllium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Cadmium	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Calcium	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Chromium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Cobalt	49.5	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Iron	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Lead	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Magnesium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Manganese	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Molybdenum	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Nickel	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Selenium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Silver	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Sodium	5130	ug/L	5000	ug/L	102.6	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Thallium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Thorium	55.3	ug/L	50	ug/L	110.7	90.0 − 110.0 *	MS	28−APR−21 20:13	210428−2
	Vanadium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Zinc	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	28−APR−21 20:13	210428−2
	Potassium	5280	ug/L	5000	ug/L	105.5	90.0 − 110.0	MS	29−APR−21 04:39	210428−4
	Uranium−235	0.36	ug/L	0.36	ug/L	101.2	90.0 − 110.0	MS	29−APR−21 10:09	210429−5
	Uranium−238	50.4	ug/L	49.64	ug/L	101.5	90.0 − 110.0	MS	29−APR−21 10:09	210429−5
	Copper	52.8	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	30−APR−21 09:39	210430−10
	Aluminum	5210	ug/L	5050	ug/L	103.2	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Antimony	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Arsenic	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Beryllium	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Cadmium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Calcium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Chromium	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Cobalt	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Copper	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Iron	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Lead	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Manganese	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Molybdenum	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Nickel	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Selenium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Silver	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Sodium	5250	ug/L	5000	ug/L	105	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Thallium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Thorium	54.2	ug/L	50	ug/L	108.3	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Vanadium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Zinc	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	01−MAY−21 12:19	210501−6
	Antimony	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	01−MAY−21 16:36	210501−7
	Arsenic	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	01−MAY−21 16:36	210501−7
	Cadmium	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	01−MAY−21 16:36	210501−7
	Molybdenum	52.5	ug/L	50	ug/L	105.1	90.0 − 110.0	MS	01−MAY−21 16:36	210501−7
	Selenium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	01−MAY−21 16:36	210501−7
	Silver	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	01−MAY−21 16:36	210501−7
	Zinc	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	01−MAY−21 16:36	210501−7
	Calcium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	02−MAY−21 12:34	210502−8
	Magnesium	5230	ug/L	5000	ug/L	104.7	90.0 − 110.0	MS	02−MAY−21 12:34	210502−8
	Potassium	5260	ug/L	5000	ug/L	105.2	90.0 − 110.0	MS	02−MAY−21 12:34	210502−8
	Uranium−235	0.37	ug/L	0.36	ug/L	103.1	90.0 − 110.0	MS	03−MAY−21 10:11	210502−9
	Uranium−238	50.8	ug/L	49.64	ug/L	102.4	90.0 − 110.0	MS	03−MAY−21 10:11	210502−9

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV03										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.2	90.0 − 110.0	MS	28−APR−21 18:10	210428−1
	Uranium−238	50	ug/L	49.64	ug/L	100.8	90.0 − 110.0	MS	28−APR−21 18:10	210428−1
	Aluminum	5140	ug/L	5050	ug/L	101.7	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Antimony	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Arsenic	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Barium	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Beryllium	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Cadmium	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Chromium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Cobalt	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Iron	5010	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Lead	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Manganese	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Molybdenum	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Nickel	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Selenium	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Silver	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Sodium	5220	ug/L	5000	ug/L	104.4	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Thallium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Thorium	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Vanadium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Zinc	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	28−APR−21 21:47	210428−2
	Potassium	5280	ug/L	5000	ug/L	105.5	90.0 − 110.0	MS	29−APR−21 04:53	210428−4
	Uranium−235	0.36	ug/L	0.36	ug/L	99.2	90.0 − 110.0	MS	29−APR−21 10:21	210429−5
	Uranium−238	49.3	ug/L	49.64	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 10:21	210429−5
	Copper	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	30−APR−21 10:13	210430−10
	Aluminum	5070	ug/L	5050	ug/L	100.4	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Antimony	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Arsenic	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Beryllium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Cadmium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Calcium	4890	ug/L	5000	ug/L	97.7	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Chromium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Cobalt	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Copper	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Iron	4960	ug/L	5000	ug/L	99.3	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Lead	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Manganese	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Molybdenum	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Nickel	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Selenium	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Silver	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Sodium	5040	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Thallium	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Thorium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Vanadium	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Zinc	48.4	ug/L	50	ug/L	96.7	90.0 − 110.0	MS	01−MAY−21 14:07	210501−6
	Antimony	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	01−MAY−21 17:05	210501−7
	Arsenic	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	01−MAY−21 17:05	210501−7
	Cadmium	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	01−MAY−21 17:05	210501−7
	Molybdenum	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	01−MAY−21 17:05	210501−7
	Selenium	52.3	ug/L	50	ug/L	104.5	90.0 − 110.0	MS	01−MAY−21 17:05	210501−7
	Silver	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	01−MAY−21 17:05	210501−7
	Zinc	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	01−MAY−21 17:05	210501−7
	Calcium	4780	ug/L	5000	ug/L	95.7	90.0 − 110.0	MS	02−MAY−21 13:55	210502−8
	Magnesium	5240	ug/L	5000	ug/L	104.7	90.0 − 110.0	MS	02−MAY−21 13:55	210502−8
	Potassium	5240	ug/L	5000	ug/L	104.7	90.0 − 110.0	MS	02−MAY−21 13:55	210502−8
	Uranium−235	0.38	ug/L	0.36	ug/L	105.5	90.0 − 110.0	MS	03−MAY−21 10:26	210502−9
	Uranium−238	51.2	ug/L	49.64	ug/L	103.2	90.0 − 110.0	MS	03−MAY−21 10:26	210502−9

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV04										
	Uranium−235	0.37	ug/L	0.36	ug/L	101.7	90.0 − 110.0	MS	28−APR−21 18:28	210428−1
	Uranium−238	50.5	ug/L	49.64	ug/L	101.8	90.0 − 110.0	MS	28−APR−21 18:28	210428−1
	Aluminum	4940	ug/L	5050	ug/L	97.7	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Antimony	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Arsenic	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Barium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Beryllium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Cadmium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Calcium	4880	ug/L	5000	ug/L	97.6	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Chromium	48.5	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Cobalt	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Iron	4810	ug/L	5000	ug/L	96.2	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Lead	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Manganese	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Molybdenum	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Nickel	48.4	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Selenium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Silver	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Sodium	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Thallium	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Thorium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Vanadium	48.5	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Zinc	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	28−APR−21 22:02	210428−2
	Potassium	5240	ug/L	5000	ug/L	104.7	90.0 − 110.0	MS	29−APR−21 05:35	210428−4
	Copper	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	30−APR−21 10:33	210430−10
	Aluminum	5020	ug/L	5050	ug/L	99.5	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Antimony	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Arsenic	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Barium	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Beryllium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cadmium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Chromium	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Cobalt	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Copper	52.4	ug/L	50	ug/L	104.7	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Iron	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Lead	53.1	ug/L	50	ug/L	106.2	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Manganese	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Molybdenum	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Nickel	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Selenium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Silver	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Sodium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Thallium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Thorium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Vanadium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Zinc	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	01−MAY−21 14:36	210501−6
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 − 110.0	MS	02−MAY−21 14:11	210502−8
	Magnesium	5190	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	02−MAY−21 14:11	210502−8
	Potassium	5150	ug/L	5000	ug/L	103	90.0 − 110.0	MS	02−MAY−21 14:11	210502−8
	Uranium−235	0.38	ug/L	0.36	ug/L	104.7	90.0 − 110.0	MS	03−MAY−21 10:47	210502−9
	Uranium−238	51.4	ug/L	49.64	ug/L	103.6	90.0 − 110.0	MS	03−MAY−21 10:47	210502−9
CCV05										
	Aluminum	4890	ug/L	5050	ug/L	96.8	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Antimony	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Arsenic	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Barium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Beryllium	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Cadmium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Calcium	4840	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Chromium	48	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	28−APR−21 22:45	210428−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cobalt	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Iron	4780	ug/L	5000	ug/L	95.5	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Lead	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Manganese	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Molybdenum	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Nickel	48	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Selenium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Silver	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Sodium	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Thallium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Thorium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Vanadium	48	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Zinc	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	28−APR−21 22:45	210428−2
	Potassium	5250	ug/L	5000	ug/L	105.1	90.0 − 110.0	MS	29−APR−21 06:10	210428−4
	Copper	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	30−APR−21 10:57	210430−10
	Aluminum	5090	ug/L	5050	ug/L	100.8	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Arsenic	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Barium	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Beryllium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Cadmium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Calcium	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Chromium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Cobalt	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Copper	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Lead	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Manganese	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Molybdenum	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Nickel	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Selenium	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Silver	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Sodium	5190	ug/L	5000	ug/L	103.8	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Thallium	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Thorium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Vanadium	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Zinc	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	01−MAY−21 15:19	210501−6
	Calcium	4720	ug/L	5000	ug/L	94.5	90.0 − 110.0	MS	02−MAY−21 14:35	210502−8
	Magnesium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	02−MAY−21 14:35	210502−8
	Potassium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	02−MAY−21 14:35	210502−8
	Uranium−235	0.38	ug/L	0.36	ug/L	105.6	90.0 − 110.0	MS	03−MAY−21 11:02	210502−9
	Uranium−238	51.4	ug/L	49.64	ug/L	103.6	90.0 − 110.0	MS	03−MAY−21 11:02	210502−9
CCV06										
	Aluminum	4890	ug/L	5050	ug/L	96.8	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Antimony	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Arsenic	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Barium	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Beryllium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Cadmium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Calcium	4870	ug/L	5000	ug/L	97.3	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Chromium	48.4	ug/L	50	ug/L	96.7	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Cobalt	47.6	ug/L	50	ug/L	95.3	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Iron	4720	ug/L	5000	ug/L	94.4	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Lead	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Magnesium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Manganese	47.8	ug/L	50	ug/L	95.6	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Molybdenum	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Nickel	48.1	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Selenium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Silver	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Sodium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	28−APR−21 23:21	210428−2

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thallium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Thorium	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Vanadium	48.1	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Zinc	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	28−APR−21 23:21	210428−2
	Copper	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	30−APR−21 11:14	210430−10
	Aluminum	4860	ug/L	5050	ug/L	96.2	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Antimony	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Arsenic	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Barium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Beryllium	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Cadmium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Calcium	4790	ug/L	5000	ug/L	95.9	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Chromium	48	ug/L	50	ug/L	95.9	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Cobalt	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Copper	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Iron	4820	ug/L	5000	ug/L	96.5	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Lead	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Manganese	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Molybdenum	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Nickel	48.6	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Selenium	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Silver	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Sodium	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Thallium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Thorium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Vanadium	46.9	ug/L	50	ug/L	93.8	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Zinc	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	01−MAY−21 15:41	210501−6
	Calcium	4710	ug/L	5000	ug/L	94.1	90.0 − 110.0	MS	02−MAY−21 14:49	210502−8
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	02−MAY−21 14:49	210502−8
	Potassium	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	02−MAY−21 14:49	210502−8

***Analytical Methods:**

SW846

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
MS	**SW846 3005A/6020B**									

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0015	ug/L	.0014	ug/L	107.1	80.0 − 120.0	MS	28−APR−21 17:36	210428−1
	Uranium−238	.209	ug/L	.2	ug/L	104.4	80.0 − 120.0	MS	28−APR−21 17:36	210428−1
	Aluminum	49.8	ug/L	50	ug/L	99.6	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Antimony	2.8	ug/L	3	ug/L	93.3	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Arsenic	4.68	ug/L	5	ug/L	93.7	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Barium	4.19	ug/L	4	ug/L	104.7	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Beryllium	.513	ug/L	.5	ug/L	102.6	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Cadmium	.99	ug/L	1	ug/L	99	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Calcium	234	ug/L	200	ug/L	116.8	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Chromium	10.1	ug/L	10	ug/L	101	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Cobalt	1.01	ug/L	1	ug/L	100.9	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Iron	101	ug/L	100	ug/L	100.8	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Lead	2.03	ug/L	2	ug/L	101.6	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Magnesium	31	ug/L	30	ug/L	103.2	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Manganese	4.97	ug/L	5	ug/L	99.3	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Molybdenum	1.02	ug/L	1	ug/L	102	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Nickel	2.08	ug/L	2	ug/L	104.2	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Selenium	5.1	ug/L	5	ug/L	102	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Silver	1.01	ug/L	1	ug/L	101	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Sodium	267	ug/L	250	ug/L	106.9	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Thallium	1.95	ug/L	2	ug/L	97.5	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Thorium	2.16	ug/L	2	ug/L	108.1	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Vanadium	19.7	ug/L	20	ug/L	98.2	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Zinc	19.8	ug/L	20	ug/L	98.9	80.0 − 120.0	MS	28−APR−21 19:52	210428−2
	Potassium	324	ug/L	300	ug/L	107.8	80.0 − 120.0	MS	29−APR−21 04:17	210428−4
	Uranium−235	.0016	ug/L	.0014	ug/L	114.3	80.0 − 120.0	MS	29−APR−21 09:49	210429−5
	Uranium−238	.2	ug/L	.2	ug/L	100.1	80.0 − 120.0	MS	29−APR−21 09:49	210429−5
	Copper	2.12	ug/L	2	ug/L	106.2	80.0 − 120.0	MS	30−APR−21 09:26	210430−10
	Aluminum	47.5	ug/L	50	ug/L	94.9	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Antimony	2.73	ug/L	3	ug/L	91.1	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Arsenic	4.64	ug/L	5	ug/L	92.8	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Barium	3.98	ug/L	4	ug/L	99.6	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
	Beryllium	.512	ug/L	.5	ug/L	102.4	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Cadmium	.945	ug/L	1	ug/L	94.5	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Calcium	226	ug/L	200	ug/L	113.2	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Chromium	9.61	ug/L	10	ug/L	96.1	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Cobalt	.984	ug/L	1	ug/L	98.4	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Copper	2.13	ug/L	2	ug/L	106.7	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Iron	96.6	ug/L	100	ug/L	96.6	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Lead	2.03	ug/L	2	ug/L	101.3	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Manganese	4.81	ug/L	5	ug/L	96.2	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Molybdenum	1.01	ug/L	1	ug/L	100.9	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Nickel	1.99	ug/L	2	ug/L	99.6	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Selenium	4.76	ug/L	5	ug/L	95.3	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Silver	1.01	ug/L	1	ug/L	100.8	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Sodium	253	ug/L	250	ug/L	101.1	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Thallium	1.95	ug/L	2	ug/L	97.3	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Thorium	2.07	ug/L	2	ug/L	103.5	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Vanadium	19	ug/L	20	ug/L	95.2	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Zinc	20.1	ug/L	20	ug/L	100.4	80.0 − 120.0	MS	01−MAY−21 11:57	210501−6
	Antimony	2.79	ug/L	3	ug/L	93	80.0 − 120.0	MS	01−MAY−21 16:14	210501−7
	Arsenic	4.74	ug/L	5	ug/L	94.8	80.0 − 120.0	MS	01−MAY−21 16:14	210501−7
	Cadmium	.934	ug/L	1	ug/L	93.4	80.0 − 120.0	MS	01−MAY−21 16:14	210501−7
	Molybdenum	.977	ug/L	1	ug/L	97.7	80.0 − 120.0	MS	01−MAY−21 16:14	210501−7
	Selenium	5.09	ug/L	5	ug/L	101.7	80.0 − 120.0	MS	01−MAY−21 16:14	210501−7
	Silver	.988	ug/L	1	ug/L	98.8	80.0 − 120.0	MS	01−MAY−21 16:14	210501−7
	Zinc	19.9	ug/L	20	ug/L	99.5	80.0 − 120.0	MS	01−MAY−21 16:14	210501−7
	Calcium	239	ug/L	200	ug/L	119.7	80.0 − 120.0	MS	02−MAY−21 12:22	210502−8
	Magnesium	31.9	ug/L	30	ug/L	106.2	80.0 − 120.0	MS	02−MAY−21 12:22	210502−8
	Potassium	324	ug/L	300	ug/L	108	80.0 − 120.0	MS	02−MAY−21 12:22	210502−8
	Uranium−235	.0016	ug/L	.0014	ug/L	114.3	80.0 − 120.0	MS	03−MAY−21 09:08	210502−9
	Uranium−238	.206	ug/L	.2	ug/L	103	80.0 − 120.0	MS	03−MAY−21 09:08	210502−9

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS11,ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	28−APR−21 17:34	210428−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	28−APR−21 17:34	210428−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	28−APR−21 19:48	210428−2
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	28−APR−21 19:48	210428−2
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	28−APR−21 19:48	210428−2
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	28−APR−21 19:48	210428−2
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	28−APR−21 19:48	210428−2
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	28−APR−21 19:48	210428−2
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	28−APR−21 19:48	210428−2
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	28−APR−21 19:48	210428−2
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	28−APR−21 19:48	210428−2
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	28−APR−21 19:48	210428−2
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	28−APR−21 19:48	210428−2
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	28−APR−21 19:48	210428−2
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	28−APR−21 19:48	210428−2
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	28−APR−21 19:48	210428−2
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	28−APR−21 19:48	210428−2
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	28−APR−21 19:48	210428−2
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	28−APR−21 19:48	210428−2
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	28−APR−21 19:48	210428−2
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	28−APR−21 19:48	210428−2
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	28−APR−21 19:48	210428−2
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	28−APR−21 19:48	210428−2
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	28−APR−21 19:48	210428−2
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	29−APR−21 04:14	210428−4
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	29−APR−21 09:47	210429−5
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	29−APR−21 09:47	210429−5
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	30−APR−21 09:23	210430−10
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	01−MAY−21 11:53	210501−6

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	01−MAY−21 11:53	210501−6
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	01−MAY−21 11:53	210501−6
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	01−MAY−21 11:53	210501−6
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	01−MAY−21 11:53	210501−6
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	01−MAY−21 11:53	210501−6
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	01−MAY−21 16:10	210501−7
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	01−MAY−21 16:10	210501−7
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	01−MAY−21 16:10	210501−7
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	01−MAY−21 16:10	210501−7
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	01−MAY−21 16:10	210501−7
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	01−MAY−21 16:10	210501−7
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	01−MAY−21 16:10	210501−7
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	02−MAY−21 12:20	210502−8
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	02−MAY−21 12:20	210502−8
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	02−MAY−21 12:20	210502−8
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	03−MAY−21 09:07	210502−9
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	03−MAY−21 09:07	210502−9

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Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	28−APR−21 17:43	210428−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	28−APR−21 17:43	210428−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	28−APR−21 20:06	210428−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	28−APR−21 20:06	210428−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 20:06	210428−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	28−APR−21 20:06	210428−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	28−APR−21 20:06	210428−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 20:06	210428−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	28−APR−21 20:06	210428−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	28−APR−21 20:06	210428−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 20:06	210428−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	28−APR−21 20:06	210428−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	28−APR−21 20:06	210428−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	28−APR−21 20:06	210428−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	28−APR−21 20:06	210428−2
	Molybdenum	0.786	+/−1	J	0.2	1.0	LIQ	MS	28−APR−21 20:06	210428−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 20:06	210428−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 20:06	210428−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 20:06	210428−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	28−APR−21 20:06	210428−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 20:06	210428−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	28−APR−21 20:06	210428−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 20:06	210428−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 20:06	210428−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 04:31	210428−4
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	29−APR−21 09:56	210429−5
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	29−APR−21 09:56	210429−5
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 09:34	210430−10
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 12:11	210501−6

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	01−MAY−21 12:11	210501−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−MAY−21 12:11	210501−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	01−MAY−21 12:11	210501−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Molybdenum	0.916	+/−1	J	0.2	1.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−MAY−21 12:11	210501−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 12:11	210501−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−MAY−21 16:28	210501−7
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 16:28	210501−7
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 16:28	210501−7
	Molybdenum	0.781	+/−1	J	0.2	1.0	LIQ	MS	01−MAY−21 16:28	210501−7
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 16:28	210501−7
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 16:28	210501−7
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 16:28	210501−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	02−MAY−21 12:30	210502−8
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	02−MAY−21 12:30	210502−8
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	02−MAY−21 12:30	210502−8
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	03−MAY−21 09:16	210502−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	03−MAY−21 09:16	210502−9

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Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	28−APR−21 17:50	210428−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	28−APR−21 17:50	210428−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	28−APR−21 20:17	210428−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	28−APR−21 20:17	210428−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 20:17	210428−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	28−APR−21 20:17	210428−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	28−APR−21 20:17	210428−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 20:17	210428−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	28−APR−21 20:17	210428−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	28−APR−21 20:17	210428−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 20:17	210428−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	28−APR−21 20:17	210428−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	28−APR−21 20:17	210428−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	28−APR−21 20:17	210428−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	28−APR−21 20:17	210428−2
	Molybdenum	0.649	+/−1	J	0.2	1.0	LIQ	MS	28−APR−21 20:17	210428−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 20:17	210428−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 20:17	210428−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 20:17	210428−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	28−APR−21 20:17	210428−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 20:17	210428−2
	Thorium	1.1	+/−2	J	0.7	2.0	LIQ	MS	28−APR−21 20:17	210428−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 20:17	210428−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 20:17	210428−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 04:42	210428−4
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	29−APR−21 10:11	210429−5
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	29−APR−21 10:11	210429−5
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 09:41	210430−10
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 12:22	210501−6

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	01−MAY−21 12:22	210501−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−MAY−21 12:22	210501−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	01−MAY−21 12:22	210501−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Molybdenum	0.644	+/−1	J	0.2	1.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−MAY−21 12:22	210501−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Thorium	0.801	+/−2	J	0.7	2.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 12:22	210501−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−MAY−21 16:39	210501−7
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 16:39	210501−7
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 16:39	210501−7
	Molybdenum	0.618	+/−1	J	0.2	1.0	LIQ	MS	01−MAY−21 16:39	210501−7
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 16:39	210501−7
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 16:39	210501−7
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 16:39	210501−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	02−MAY−21 12:36	210502−8
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	02−MAY−21 12:36	210502−8
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	02−MAY−21 12:36	210502−8
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	03−MAY−21 10:13	210502−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	03−MAY−21 10:13	210502−9

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	28−APR−21 18:12	210428−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	28−APR−21 18:12	210428−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	28−APR−21 21:51	210428−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	28−APR−21 21:51	210428−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 21:51	210428−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	28−APR−21 21:51	210428−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	28−APR−21 21:51	210428−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 21:51	210428−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	28−APR−21 21:51	210428−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	28−APR−21 21:51	210428−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 21:51	210428−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	28−APR−21 21:51	210428−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	28−APR−21 21:51	210428−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	28−APR−21 21:51	210428−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	28−APR−21 21:51	210428−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	28−APR−21 21:51	210428−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 21:51	210428−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 21:51	210428−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 21:51	210428−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	28−APR−21 21:51	210428−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 21:51	210428−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	28−APR−21 21:51	210428−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 21:51	210428−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 21:51	210428−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 04:56	210428−4
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	29−APR−21 10:23	210429−5
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	29−APR−21 10:23	210429−5
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 10:15	210430−10
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 14:11	210501−6

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	01−MAY−21 14:11	210501−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−MAY−21 14:11	210501−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	01−MAY−21 14:11	210501−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−MAY−21 14:11	210501−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 14:11	210501−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−MAY−21 17:08	210501−7
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 17:08	210501−7
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 17:08	210501−7
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	01−MAY−21 17:08	210501−7
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 17:08	210501−7
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 17:08	210501−7
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 17:08	210501−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	02−MAY−21 13:57	210502−8
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	02−MAY−21 13:57	210502−8
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	02−MAY−21 13:57	210502−8
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	03−MAY−21 10:27	210502−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	03−MAY−21 10:27	210502−9

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	28−APR−21 18:30	210428−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	28−APR−21 18:30	210428−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	28−APR−21 22:05	210428−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	28−APR−21 22:05	210428−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 22:05	210428−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	28−APR−21 22:05	210428−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	28−APR−21 22:05	210428−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 22:05	210428−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	28−APR−21 22:05	210428−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	28−APR−21 22:05	210428−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 22:05	210428−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	28−APR−21 22:05	210428−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	28−APR−21 22:05	210428−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	28−APR−21 22:05	210428−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	28−APR−21 22:05	210428−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	28−APR−21 22:05	210428−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 22:05	210428−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 22:05	210428−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 22:05	210428−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	28−APR−21 22:05	210428−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 22:05	210428−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	28−APR−21 22:05	210428−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 22:05	210428−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 22:05	210428−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 05:39	210428−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 10:35	210430−10
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	01−MAY−21 14:40	210501−6

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−MAY−21 14:40	210501−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	01−MAY−21 14:40	210501−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−MAY−21 14:40	210501−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 14:40	210501−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	02−MAY−21 14:13	210502−8
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	02−MAY−21 14:13	210502−8
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	02−MAY−21 14:13	210502−8
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	03−MAY−21 10:49	210502−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	03−MAY−21 10:49	210502−9
CCB05										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	28−APR−21 22:49	210428−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	28−APR−21 22:49	210428−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 22:49	210428−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	28−APR−21 22:49	210428−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	28−APR−21 22:49	210428−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 22:49	210428−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	28−APR−21 22:49	210428−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	28−APR−21 22:49	210428−2

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 22:49	210428−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	28−APR−21 22:49	210428−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	28−APR−21 22:49	210428−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	28−APR−21 22:49	210428−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	28−APR−21 22:49	210428−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	28−APR−21 22:49	210428−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 22:49	210428−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 22:49	210428−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 22:49	210428−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	28−APR−21 22:49	210428−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 22:49	210428−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	28−APR−21 22:49	210428−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 22:49	210428−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 22:49	210428−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 06:14	210428−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 10:59	210430−10
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	01−MAY−21 15:23	210501−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−MAY−21 15:23	210501−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	01−MAY−21 15:23	210501−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 15:23	210501−6

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−MAY−21 15:23	210501−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 15:23	210501−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	02−MAY−21 14:37	210502−8
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	02−MAY−21 14:37	210502−8
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	02−MAY−21 14:37	210502−8
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	03−MAY−21 11:04	210502−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	03−MAY−21 11:04	210502−9
CCB06										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	28−APR−21 23:25	210428−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	28−APR−21 23:25	210428−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 23:25	210428−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	28−APR−21 23:25	210428−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	28−APR−21 23:25	210428−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 23:25	210428−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	28−APR−21 23:25	210428−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	28−APR−21 23:25	210428−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 23:25	210428−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	28−APR−21 23:25	210428−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	28−APR−21 23:25	210428−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	28−APR−21 23:25	210428−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	28−APR−21 23:25	210428−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	28−APR−21 23:25	210428−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 23:25	210428−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	28−APR−21 23:25	210428−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	28−APR−21 23:25	210428−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	28−APR−21 23:25	210428−2

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	28−APR−21 23:25	210428−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	28−APR−21 23:25	210428−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 23:25	210428−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	28−APR−21 23:25	210428−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 11:16	210430−10
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	01−MAY−21 15:45	210501−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−MAY−21 15:45	210501−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	01−MAY−21 15:45	210501−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−MAY−21 15:45	210501−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−MAY−21 15:45	210501−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	02−MAY−21 14:51	210502−8
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	02−MAY−21 14:51	210502−8
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	02−MAY−21 14:51	210502−8

***Analytical Methods:**

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540208

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
MS	**SW846 3005A/6020B**									

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 540208
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204792949								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
1204792957								
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 540208

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
1204808623								
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−4−
Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0002	ug/L					28−APR−21 17:38	210428−1
	Uranium−238	0.035	ug/L					28−APR−21 17:38	210428−1
ICSAB01									
	Uranium−235	0.142	ug/L	.145	ug/L	98.1	80.0 − 120.0	28−APR−21 17:40	210428−1
	Uranium−238	19.3	ug/L	19.86	ug/L	97.1	80.0 − 120.0	28−APR−21 17:40	210428−1

METALS
−4−
Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS11

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Copper	0.198	ug/L					30−APR−21 09:28	210430−10
ICSAB01									
	Copper	19.4	ug/L	20	ug/L	97.2	80.0 − 120.0	30−APR−21 09:30	210430−10

METALS
−4−
Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	91300	ug/L	100000	ug/L	91.3	80.0 − 120.0	28−APR−21 19:55	210428−2
	Antimony	0.062	ug/L					28−APR−21 19:55	210428−2
	Arsenic	0.131	ug/L					28−APR−21 19:55	210428−2
	Barium	2.54	ug/L					28−APR−21 19:55	210428−2
	Beryllium	0.029	ug/L					28−APR−21 19:55	210428−2
	Cadmium	0.909	ug/L					28−APR−21 19:55	210428−2
	Calcium	95500	ug/L	100000	ug/L	95.5	80.0 − 120.0	28−APR−21 19:55	210428−2
	Chromium	0.832	ug/L					28−APR−21 19:55	210428−2
	Cobalt	0.491	ug/L					28−APR−21 19:55	210428−2
	Iron	81300	ug/L	100000	ug/L	81.4	80.0 − 120.0	28−APR−21 19:55	210428−2
	Lead	0.221	ug/L					28−APR−21 19:55	210428−2
	Magnesium	89100	ug/L	100000	ug/L	89.1	80.0 − 120.0	28−APR−21 19:55	210428−2
	Manganese	5.93	ug/L					28−APR−21 19:55	210428−2
	Molybdenum	2030	ug/L	2000	ug/L	102	80.0 − 120.0	28−APR−21 19:55	210428−2
	Nickel	0.443	ug/L					28−APR−21 19:55	210428−2
	Selenium	0.173	ug/L					28−APR−21 19:55	210428−2
	Silver	0.13	ug/L					28−APR−21 19:55	210428−2
	Sodium	99600	ug/L	100000	ug/L	99.6	80.0 − 120.0	28−APR−21 19:55	210428−2
	Thallium	0.095	ug/L					28−APR−21 19:55	210428−2
	Thorium	1.81	ug/L					28−APR−21 19:55	210428−2
	Vanadium	0.039	ug/L					28−APR−21 19:55	210428−2
	Zinc	4.2	ug/L					28−APR−21 19:55	210428−2
ICSAB01									
	Aluminum	93300	ug/L	100000	ug/L	93.3	80.0 − 120.0	28−APR−21 19:59	210428−2
	Antimony	20.1	ug/L	20	ug/L	100	80.0 − 120.0	28−APR−21 19:59	210428−2
	Arsenic	20.8	ug/L	20	ug/L	104	80.0 − 120.0	28−APR−21 19:59	210428−2
	Barium	22.1	ug/L	22.35	ug/L	99	80.0 − 120.0	28−APR−21 19:59	210428−2
	Beryllium	19.0	ug/L	20	ug/L	94.7	80.0 − 120.0	28−APR−21 19:59	210428−2
	Cadmium	20.2	ug/L	20.72	ug/L	97.3	80.0 − 120.0	28−APR−21 19:59	210428−2
	Calcium	96400	ug/L	100000	ug/L	96.4	80.0 − 120.0	28−APR−21 19:59	210428−2

METALS
−4−
Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Chromium	20.8	ug/L	20	ug/L	104	80.0 − 120.0	28−APR−21 19:59	210428−2
	Cobalt	19.9	ug/L	20.65	ug/L	96.2	80.0 − 120.0	28−APR−21 19:59	210428−2
	Iron	82500	ug/L	100000	ug/L	82.5	80.0 − 120.0	28−APR−21 19:59	210428−2
	Lead	19.0	ug/L	20	ug/L	94.8	80.0 − 120.0	28−APR−21 19:59	210428−2
	Magnesium	90400	ug/L	100000	ug/L	90.4	80.0 − 120.0	28−APR−21 19:59	210428−2
	Manganese	25.7	ug/L	25.72	ug/L	99.9	80.0 − 120.0	28−APR−21 19:59	210428−2
	Molybdenum	2030	ug/L	2000	ug/L	102	80.0 − 120.0	28−APR−21 19:59	210428−2
	Nickel	18.9	ug/L	20	ug/L	94.6	80.0 − 120.0	28−APR−21 19:59	210428−2
	Selenium	21.2	ug/L	20	ug/L	106	80.0 − 120.0	28−APR−21 19:59	210428−2
	Silver	18.4	ug/L	20	ug/L	92.1	80.0 − 120.0	28−APR−21 19:59	210428−2
	Sodium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	28−APR−21 19:59	210428−2
	Thallium	18.3	ug/L	20	ug/L	91.6	80.0 − 120.0	28−APR−21 19:59	210428−2
	Thorium	21.4	ug/L	20	ug/L	107	80.0 − 120.0	28−APR−21 19:59	210428−2
	Vanadium	20.5	ug/L	20	ug/L	103	80.0 − 120.0	28−APR−21 19:59	210428−2
	Zinc	20.1	ug/L	20	ug/L	101	80.0 − 120.0	28−APR−21 19:59	210428−2

METALS
−4−
Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Potassium	99400	ug/L	100000	ug/L	99.4	80.0 − 120.0	29−APR−21 04:21	210428−4
ICSAB01									
	Potassium	98400	ug/L	100000	ug/L	98.4	80.0 − 120.0	29−APR−21 04:24	210428−4

METALS
−4−
Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					29−APR−21 09:51	210429−5
	Uranium−238	0.023	ug/L					29−APR−21 09:51	210429−5
ICSAB01									
	Uranium−235	0.142	ug/L	.145	ug/L	97.9	80.0 − 120.0	29−APR−21 09:53	210429−5
	Uranium−238	19.1	ug/L	19.86	ug/L	96.2	80.0 − 120.0	29−APR−21 09:53	210429−5

METALS
−4−
Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	91700	ug/L	100000	ug/L	91.7	80.0 − 120.0	01−MAY−21 12:01	210501−6
	Antimony	0.044	ug/L					01−MAY−21 12:01	210501−6
	Arsenic	0.125	ug/L					01−MAY−21 12:01	210501−6
	Barium	2.64	ug/L					01−MAY−21 12:01	210501−6
	Beryllium	0.023	ug/L					01−MAY−21 12:01	210501−6
	Cadmium	0.926	ug/L					01−MAY−21 12:01	210501−6
	Calcium	93100	ug/L	100000	ug/L	93.1	80.0 − 120.0	01−MAY−21 12:01	210501−6
	Chromium	0.796	ug/L					01−MAY−21 12:01	210501−6
	Cobalt	0.492	ug/L					01−MAY−21 12:01	210501−6
	Copper	0.199	ug/L					01−MAY−21 12:01	210501−6
	Iron	81600	ug/L	100000	ug/L	81.6	80.0 − 120.0	01−MAY−21 12:01	210501−6
	Lead	0.203	ug/L					01−MAY−21 12:01	210501−6
	Manganese	6.35	ug/L					01−MAY−21 12:01	210501−6
	Molybdenum	2090	ug/L	2000	ug/L	105	80.0 − 120.0	01−MAY−21 12:01	210501−6
	Nickel	0.451	ug/L					01−MAY−21 12:01	210501−6
	Selenium	0.172	ug/L					01−MAY−21 12:01	210501−6
	Silver	0.137	ug/L					01−MAY−21 12:01	210501−6
	Sodium	97200	ug/L	100000	ug/L	97.2	80.0 − 120.0	01−MAY−21 12:01	210501−6
	Thallium	0.08	ug/L					01−MAY−21 12:01	210501−6
	Thorium	1.83	ug/L					01−MAY−21 12:01	210501−6
	Vanadium	−0.403	ug/L					01−MAY−21 12:01	210501−6
	Zinc	1.9	ug/L					01−MAY−21 12:01	210501−6
ICSAB01									
	Aluminum	93500	ug/L	100000	ug/L	93.5	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Antimony	19.9	ug/L	20	ug/L	99.5	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Arsenic	21.1	ug/L	20	ug/L	105	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Barium	22.5	ug/L	22.35	ug/L	100	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Beryllium	18.0	ug/L	20	ug/L	90	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Cadmium	20.2	ug/L	20.72	ug/L	97.5	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Calcium	92800	ug/L	100000	ug/L	92.8	80.0 − 120.0	01−MAY−21 12:04	210501−6

METALS
−4−
Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Chromium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Cobalt	19.8	ug/L	20.65	ug/L	96	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Copper	17.6	ug/L	20	ug/L	88.1	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Iron	82500	ug/L	100000	ug/L	82.5	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Lead	19.2	ug/L	20	ug/L	95.8	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Manganese	26.2	ug/L	25.72	ug/L	102	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Molybdenum	2110	ug/L	2000	ug/L	106	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Nickel	18.5	ug/L	20	ug/L	92.7	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Selenium	21.2	ug/L	20	ug/L	106	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Silver	18.7	ug/L	20	ug/L	93.5	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Sodium	99500	ug/L	100000	ug/L	99.5	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Thallium	18.2	ug/L	20	ug/L	91.2	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Thorium	21.6	ug/L	20	ug/L	108	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Vanadium	19.3	ug/L	20	ug/L	96.6	80.0 − 120.0	01−MAY−21 12:04	210501−6
	Zinc	20.2	ug/L	20	ug/L	101	80.0 − 120.0	01−MAY−21 12:04	210501−6

METALS
−4−
Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.045	ug/L					01−MAY−21 16:17	210501−7
	Arsenic	0.165	ug/L					01−MAY−21 16:17	210501−7
	Cadmium	0.943	ug/L					01−MAY−21 16:17	210501−7
	Molybdenum	2130	ug/L	2000	ug/L	107	80.0 − 120.0	01−MAY−21 16:17	210501−7
	Selenium	0.258	ug/L					01−MAY−21 16:17	210501−7
	Silver	0.139	ug/L					01−MAY−21 16:17	210501−7
	Zinc	2.05	ug/L					01−MAY−21 16:17	210501−7
ICSAB01									
	Antimony	20.4	ug/L	20	ug/L	102	80.0 − 120.0	01−MAY−21 16:21	210501−7
	Arsenic	21.4	ug/L	20	ug/L	107	80.0 − 120.0	01−MAY−21 16:21	210501−7
	Cadmium	20.4	ug/L	20.72	ug/L	98.2	80.0 − 120.0	01−MAY−21 16:21	210501−7
	Molybdenum	2130	ug/L	2000	ug/L	106	80.0 − 120.0	01−MAY−21 16:21	210501−7
	Selenium	21.7	ug/L	20	ug/L	108	80.0 − 120.0	01−MAY−21 16:21	210501−7
	Silver	18.7	ug/L	20	ug/L	93.4	80.0 − 120.0	01−MAY−21 16:21	210501−7
	Zinc	21.2	ug/L	20	ug/L	106	80.0 − 120.0	01−MAY−21 16:21	210501−7

METALS
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Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	92900	ug/L	100000	ug/L	92.9	80.0 − 120.0	02−MAY−21 12:24	210502−8
	Magnesium	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	02−MAY−21 12:24	210502−8
	Potassium	96200	ug/L	100000	ug/L	96.3	80.0 − 120.0	02−MAY−21 12:24	210502−8
ICSAB01									
	Calcium	93800	ug/L	100000	ug/L	93.8	80.0 − 120.0	02−MAY−21 12:26	210502−8
	Magnesium	94900	ug/L	100000	ug/L	94.9	80.0 − 120.0	02−MAY−21 12:26	210502−8
	Potassium	98300	ug/L	100000	ug/L	98.3	80.0 − 120.0	02−MAY−21 12:26	210502−8

METALS
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Interference Check Sample

SDG No: 540208

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0002	ug/L					03−MAY−21 09:10	210502−9
	Uranium−238	0.026	ug/L					03−MAY−21 09:10	210502−9
ICSAB01									
	Uranium−235	0.141	ug/L	.145	ug/L	97.2	80.0 − 120.0	03−MAY−21 09:12	210502−9
	Uranium−238	19.2	ug/L	19.86	ug/L	96.7	80.0 − 120.0	03−MAY−21 09:12	210502−9

METALS
−5a−

Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S17−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208005 **Spike ID:** 1204792951

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2000		19.3	U	2000	99.4		MS
Antimony	ug/L	75−125	51.2		1.84	J	50.0	98.7		MS
Arsenic	ug/L	75−125	49.5		2.00	U	50.0	98.1		MS
Barium	ug/L	75−125	70.0		19.8		50.0	100		MS
Beryllium	ug/L	75−125	53.6		0.200	U	50.0	107		MS
Cadmium	ug/L	75−125	50.5		0.300	U	50.0	101		MS
Calcium	ug/L		21700		19400		2000	117	N/A	MS
Chromium	ug/L	75−125	48.1		3.00	U	50.0	95.6		MS
Cobalt	ug/L	75−125	48.4		0.300	U	50.0	96.7		MS
Copper	ug/L	75−125	47.5		0.300	U	50.0	94.8		MS
Iron	ug/L	75−125	1930		33.0	U	2000	95.3		MS
Lead	ug/L	75−125	50.4		0.500	U	50.0	101		MS
Magnesium	ug/L	75−125	7700		5450		2000	113		MS
Manganese	ug/L	75−125	49.0		1.00	U	50.0	96.4		MS
Molybdenum	ug/L	75−125	52.4		0.268	J	50.0	104		MS
Nickel	ug/L	75−125	48.6		0.837	J	50.0	95.5		MS
Potassium	ug/L	75−125	5450		3300		2000	107		MS
Selenium	ug/L	75−125	50.2		2.00	U	50.0	100		MS
Silver	ug/L	75−125	50.3		0.300	U	50.0	101		MS
Sodium	ug/L		25400		22700		2000	131	N/A	MS
Thallium	ug/L	75−125	47.6		0.600	U	50.0	95		MS
Thorium	ug/L	75−125	50.2		0.700	U	50.0	100		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S17−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208005 **Spike ID:** 1204792951

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.405		0.0100	U	0.360	112		MS
Uranium−238	ug/L	75−125	55.3		0.420		49.6	111		MS
Vanadium	ug/L	75−125	48.7		3.30	U	50.0	95.9		MS
Zinc	ug/L	75−125	49.3		3.30	U	50.0	95.6		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 540208 **Client ID** MW−S17−04062021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208005 **Spike ID:** 1204792952

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Nickel	ug/L	75−125	47.7		0.837	J	50.0	93.7		MS
Potassium	ug/L	75−125	5600		3300		2000	115		MS
Selenium	ug/L	75−125	50.2		2.00	U	50.0	100		MS
Silver	ug/L	75−125	51.4		0.300	U	50.0	103		MS
Sodium	ug/L		25100		22700		2000	118	N/A	MS
Thallium	ug/L	75−125	47.5		0.600	U	50.0	94.8		MS
Thorium	ug/L	75−125	49.5		0.700	U	50.0	98.6		MS
Uranium−235	ug/L	75−125	0.405		0.0100	U	0.360	112		MS
Uranium−238	ug/L	75−125	55.3		0.420		49.6	111		MS
Vanadium	ug/L	75−125	48.6		3.30	U	50.0	95.7		MS
Zinc	ug/L	75−125	49.0		3.30	U	50.0	95.1		MS
Aluminum	ug/L	75−125	1960		19.3	U	2000	97.7		MS
Antimony	ug/L	75−125	51.9		1.84	J	50.0	100		MS
Arsenic	ug/L	75−125	49.6		2.00	U	50.0	98.1		MS
Barium	ug/L	75−125	69.8		19.8		50.0	99.9		MS
Beryllium	ug/L	75−125	52.7		0.200	U	50.0	105		MS
Cadmium	ug/L	75−125	51.4		0.300	U	50.0	103		MS
Calcium	ug/L		21800		19400		2000	120	N/A	MS
Chromium	ug/L	75−125	47.7		3.00	U	50.0	94.9		MS
Cobalt	ug/L	75−125	47.8		0.300	U	50.0	95.5		MS
Copper	ug/L	75−125	46.2		0.300	U	50.0	92.2		MS
Iron	ug/L	75−125	1900		33.0	U	2000	93.7		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 540208 **Client ID** MW−S17−04062021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208005 **Spike ID:** 1204792952

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Lead	ug/L	75−125	49.7		0.500	U	50.0	99.4		MS
Magnesium	ug/L	75−125	7860		5450		2000	120		MS
Manganese	ug/L	75−125	48.0		1.00	U	50.0	94.5		MS
Molybdenum	ug/L	75−125	53.0		0.268	J	50.0	105		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S17−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208006 **Spike ID:** 1204792954

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Silver	ug/L	75−125	51.7		0.300	U	50.0	103		MS
Sodium	ug/L		24600		23900		2000	33.5	N/A	MS
Thallium	ug/L	75−125	47.6		0.600	U	50.0	95		MS
Thorium	ug/L	75−125	50.1		0.700	U	50.0	100		MS
Uranium−235	ug/L	75−125	0.402		0.0100	U	0.360	111		MS
Uranium−238	ug/L	75−125	56.5		0.345		49.6	113		MS
Vanadium	ug/L	75−125	48.5		3.30	U	50.0	95.4		MS
Zinc	ug/L	75−125	49.7		3.30	U	50.0	95.8		MS
Aluminum	ug/L	75−125	1970		19.3	U	2000	98.4		MS
Antimony	ug/L	75−125	51.3		1.99	J	50.0	98.5		MS
Arsenic	ug/L	75−125	50.6		2.00	U	50.0	100		MS
Barium	ug/L	75−125	69.1		20.0		50.0	98.3		MS
Beryllium	ug/L	75−125	51.4		0.200	U	50.0	103		MS
Cadmium	ug/L	75−125	50.9		0.300	U	50.0	102		MS
Calcium	ug/L		21600		20200		2000	67.5	N/A	MS
Chromium	ug/L	75−125	47.8		3.00	U	50.0	95.2		MS
Cobalt	ug/L	75−125	47.9		0.300	U	50.0	95.6		MS
Copper	ug/L	75−125	47.1		0.338	J	50.0	93.4		MS
Iron	ug/L	75−125	1920		33.0	U	2000	95.1		MS
Lead	ug/L	75−125	50.8		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	7700		5610		2000	105		MS
Manganese	ug/L	75−125	48.4		1.00	U	50.0	95.4		MS

METALS
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Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S17−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208006 **Spike ID:** 1204792954

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Molybdenum	ug/L	75−125	53.4		0.262	J	50.0	106		MS
Nickel	ug/L	75−125	47.7		0.864	J	50.0	93.7		MS
Potassium	ug/L	75−125	5470		3360		2000	105		MS
Selenium	ug/L	75−125	49.4		2.00	U	50.0	98.5		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 540208 **Client ID** MW−S17−04062021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208006 **Spike ID:** 1204792955

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	1960		19.3	U	2000	97.7		MS
Antimony	ug/L	75−125	51.4		1.99	J	50.0	98.9		MS
Arsenic	ug/L	75−125	50.2		2.00	U	50.0	99.4		MS
Barium	ug/L	75−125	69.0		20.0		50.0	98		MS
Beryllium	ug/L	75−125	52.7		0.200	U	50.0	105		MS
Cadmium	ug/L	75−125	51.4		0.300	U	50.0	103		MS
Calcium	ug/L		21800		20200		2000	77.2	N/A	MS
Chromium	ug/L	75−125	47.6		3.00	U	50.0	94.9		MS
Cobalt	ug/L	75−125	48.4		0.300	U	50.0	96.6		MS
Copper	ug/L	75−125	47.4		0.338	J	50.0	94.2		MS
Iron	ug/L	75−125	1920		33.0	U	2000	95.2		MS
Lead	ug/L	75−125	50.0		0.500	U	50.0	100		MS
Magnesium	ug/L	75−125	7670		5610		2000	103		MS
Manganese	ug/L	75−125	48.3		1.00	U	50.0	95.2		MS
Molybdenum	ug/L	75−125	53.6		0.262	J	50.0	107		MS
Nickel	ug/L	75−125	48.4		0.864	J	50.0	95.1		MS
Potassium	ug/L	75−125	5480		3360		2000	106		MS
Selenium	ug/L	75−125	50.5		2.00	U	50.0	101		MS
Silver	ug/L	75−125	51.4		0.300	U	50.0	103		MS
Sodium	ug/L		25600		23900		2000	84.9	N/A	MS
Thallium	ug/L	75−125	46.9		0.600	U	50.0	93.7		MS
Thorium	ug/L	75−125	49.5		0.700	U	50.0	98.8		MS

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METALS
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Matrix Spike Duplicate Summary

SDG NO. 540208 **Client ID:** MW−S17−04062021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208006 **Spike ID:** 1204792955

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.404		0.0100	U	0.360	112		MS
Uranium−238	ug/L	75−125	54.7		0.345		49.6	109		MS
Vanadium	ug/L	75−125	48.1		3.30	U	50.0	94.5		MS
Zinc	ug/L	75−125	49.9		3.30	U	50.0	96.2		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S28−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208011 **Spike ID:** 1204792959

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2000		19.3	U	2000	99.2		MS
Antimony	ug/L	75−125	50.3		1.00	U	50.0	99		MS
Arsenic	ug/L	75−125	48.7		2.00	U	50.0	96.5		MS
Barium	ug/L	75−125	55.1		5.38		50.0	99.5		MS
Beryllium	ug/L	75−125	53.5		0.200	U	50.0	107		MS
Cadmium	ug/L	75−125	50.3		0.300	U	50.0	101		MS
Calcium	ug/L	75−125	8900		6660		2000	112		MS
Chromium	ug/L	75−125	47.9		3.00	U	50.0	95		MS
Cobalt	ug/L	75−125	50.9		3.92		50.0	93.9		MS
Iron	ug/L	75−125	1900		33.0	U	2000	93.6		MS
Lead	ug/L	75−125	50.1		0.500	U	50.0	100		MS
Magnesium	ug/L	75−125	3360		1310		2000	102		MS
Manganese	ug/L	75−125	48.4		1.13	J	50.0	94.5		MS
Molybdenum	ug/L	75−125	51.7		0.230	J	50.0	103		MS
Nickel	ug/L	75−125	47.8		1.12	J	50.0	93.3		MS
Potassium	ug/L	75−125	3850		1730		2000	106		MS
Selenium	ug/L	75−125	50.6		2.00	U	50.0	101		MS
Silver	ug/L	75−125	51.3		0.300	U	50.0	103		MS
Sodium	ug/L		11200		8870		2000	118	N/A	MS
Thallium	ug/L	75−125	48.0		0.600	U	50.0	95.9		MS
Thorium	ug/L	75−125	50.2		0.700	U	50.0	99.9		MS
Uranium−235	ug/L	75−125	0.360		0.0100	U	0.360	99.9		MS

METALS
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Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S28−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208011 **Spike ID:** 1204792959

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−238	ug/L	75−125	49.9		0.0670	U	49.6	100		MS
Vanadium	ug/L	75−125	48.6		3.30	U	50.0	95.2		MS
Zinc	ug/L	75−125	49.9		3.30	U	50.0	93.5		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO.	540208	**Client ID**	MW−S28−04062021SD
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	540208011	**Spike ID:**	1204792960

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Molybdenum	ug/L	75−125	52.2		0.230	J	50.0	104		MS
Nickel	ug/L	75−125	49.0		1.12	J	50.0	95.7		MS
Potassium	ug/L	75−125	3890		1730		2000	108		MS
Selenium	ug/L	75−125	50.1		2.00	U	50.0	99.8		MS
Silver	ug/L	75−125	51.5		0.300	U	50.0	103		MS
Sodium	ug/L		11600		8870		2000	135	N/A	MS
Thallium	ug/L	75−125	48.2		0.600	U	50.0	96.3		MS
Thorium	ug/L	75−125	50.7		0.700	U	50.0	101		MS
Uranium−235	ug/L	75−125	0.364		0.0100	U	0.360	101		MS
Uranium−238	ug/L	75−125	50.1		0.0670	U	49.6	101		MS
Vanadium	ug/L	75−125	49.4		3.30	U	50.0	96.9		MS
Zinc	ug/L	75−125	49.8		3.30	U	50.0	93.4		MS
Aluminum	ug/L	75−125	2040		19.3	U	2000	101		MS
Antimony	ug/L	75−125	51.2		1.00	U	50.0	101		MS
Arsenic	ug/L	75−125	48.9		2.00	U	50.0	96.9		MS
Barium	ug/L	75−125	56.4		5.38		50.0	102		MS
Beryllium	ug/L	75−125	55.8		0.200	U	50.0	111		MS
Cadmium	ug/L	75−125	51.2		0.300	U	50.0	102		MS
Calcium	ug/L	75−125	9210		6660		2000	127	N	MS
Chromium	ug/L	75−125	49.0		3.00	U	50.0	97.2		MS
Cobalt	ug/L	75−125	52.2		3.92		50.0	96.6		MS
Iron	ug/L	75−125	1950		33.0	U	2000	96.4		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO.	540208	**Client ID:**	MW−S28−04062021SD
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	540208011	**Spike ID:**	1204792960

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Lead	ug/L	75−125	50.8		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	3440		1310		2000	107		MS
Manganese	ug/L	75−125	48.9		1.13	J	50.0	95.5		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S28−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208012 **Spike ID:** 1204792962

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Silver	ug/L	75−125	51.9		0.300	U	50.0	104		MS
Sodium	ug/L		10900		8620		2000	113	N/A	MS
Thallium	ug/L	75−125	49.1		0.600	U	50.0	97.9		MS
Thorium	ug/L	75−125	51.3		0.700	U	50.0	102		MS
Uranium−235	ug/L	75−125	0.371		0.0100	U	0.360	103		MS
Uranium−238	ug/L	75−125	50.8		0.0670	U	49.6	102		MS
Vanadium	ug/L	75−125	50.4		3.30	U	50.0	98.6		MS
Zinc	ug/L	75−125	52.2		5.48	J	50.0	93.5		MS
Aluminum	ug/L	75−125	2050		19.3	U	2000	102		MS
Antimony	ug/L	75−125	51.0		1.00	U	50.0	100		MS
Arsenic	ug/L	75−125	49.1		2.00	U	50.0	97.4		MS
Barium	ug/L	75−125	56.4		5.22		50.0	102		MS
Beryllium	ug/L	75−125	55.3		0.200	U	50.0	111		MS
Cadmium	ug/L	75−125	51.4		0.300	U	50.0	103		MS
Calcium	ug/L	75−125	9280		7020		2000	113		MS
Chromium	ug/L	75−125	49.6		3.00	U	50.0	98.3		MS
Cobalt	ug/L	75−125	52.1		3.77		50.0	96.7		MS
Iron	ug/L	75−125	1950		33.0	U	2000	96.8		MS
Lead	ug/L	75−125	51.2		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	3510		1400		2000	105		MS
Manganese	ug/L	75−125	51.0		2.34	J	50.0	97.4		MS
Molybdenum	ug/L	75−125	51.8		0.200	U	50.0	103		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S28−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208012 **Spike ID:** 1204792962

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Nickel	ug/L	75−125	50.2		2.17		50.0	96.1		MS
Potassium	ug/L	75−125	3770		1680		2000	104		MS
Selenium	ug/L	75−125	51.5		2.00	U	50.0	103		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO.	540208	**Client ID**	MW−S28−04062021SD
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	540208012	**Spike ID:**	1204792963

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2030		19.3	U	2000	101		MS
Antimony	ug/L	75−125	51.0		1.00	U	50.0	100		MS
Arsenic	ug/L	75−125	49.3		2.00	U	50.0	97.7		MS
Barium	ug/L	75−125	57.8		5.22		50.0	105		MS
Beryllium	ug/L	75−125	54.9		0.200	U	50.0	110		MS
Cadmium	ug/L	75−125	51.5		0.300	U	50.0	103		MS
Calcium	ug/L	75−125	9160		7020		2000	107		MS
Chromium	ug/L	75−125	56.5		3.00	U	50.0	112		MS
Cobalt	ug/L	75−125	51.7		3.77		50.0	95.9		MS
Iron	ug/L	75−125	1990		33.0	U	2000	98.8		MS
Lead	ug/L	75−125	51.8		0.500	U	50.0	104		MS
Magnesium	ug/L	75−125	3450		1400		2000	102		MS
Manganese	ug/L	75−125	51.0		2.34	J	50.0	97.3		MS
Molybdenum	ug/L	75−125	52.8		0.200	U	50.0	105		MS
Nickel	ug/L	75−125	49.6		2.17		50.0	94.9		MS
Potassium	ug/L	75−125	3810		1680		2000	106		MS
Selenium	ug/L	75−125	50.7		2.00	U	50.0	101		MS
Silver	ug/L	75−125	52.4		0.300	U	50.0	105		MS
Sodium	ug/L		10700		8620		2000	105	N/A	MS
Thallium	ug/L	75−125	49.2		0.600	U	50.0	98.2		MS
Thorium	ug/L	75−125	52.0		0.700	U	50.0	104		MS
Uranium−235	ug/L	75−125	0.370		0.0100	U	0.360	103		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO.	540208	**Client ID**	MW−S28−04062021SD
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	540208012	**Spike ID:**	1204792963

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−238	ug/L	75−125	51.0		0.0670	U	49.6	103		MS
Vanadium	ug/L	75−125	49.9		3.30	U	50.0	97.5		MS
Zinc	ug/L	75−125	52.2		5.48	J	50.0	93.4		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Spike Summary

SDG NO. 540208 **Client ID**: MW−S28−04062021PS

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208011 **Spike ID:** 1204807972

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Calcium	ug/L	75−125	8730		6660		2000	103		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S28−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208011 **Spike ID:** 1204808625

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Copper	ug/L	75−125	50.8		0.300	U	50.0	101		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 540208 **Client ID** MW−S28−04062021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208011 **Spike ID:** 1204808626

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Copper	ug/L	75−125	48.5		0.300	U	50.0	96.8		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Summary

SDG NO. 540208 **Client ID** MW−S28−04062021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540208012 **Spike ID:** 1204808628

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Copper	ug/L	75−125	49.2		0.665	J	50.0	97.1		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO.	540208	**Client ID**	MW−S28−04062021SD
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	540208012	**Spike ID:**	1204808629

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Copper	ug/L	75−125	48.5		0.665	J	50.0	95.7		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S17−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792951 **Duplicate ID:** 1204792952 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2000		1960		1.65		MS
Antimony	ug/L	+/−20	51.2		51.9		1.33		MS
Arsenic	ug/L	+/−20	49.5		49.6		.0323		MS
Barium	ug/L	+/−20	70.0		69.8		.312		MS
Beryllium	ug/L	+/−20	53.6		52.7		1.61		MS
Cadmium	ug/L	+/−20	50.5		51.4		1.65		MS
Calcium	ug/L	+/−20	21700		21800		.229		MS
Chromium	ug/L	+/−20	48.1		47.7		.756		MS
Cobalt	ug/L	+/−20	48.4		47.8		1.26		MS
Copper	ug/L	+/−20	47.5		46.2		2.81		MS
Iron	ug/L	+/−20	1930		1900		1.62		MS
Lead	ug/L	+/−20	50.4		49.7		1.41		MS
Magnesium	ug/L	+/−20	7700		7860		2.05		MS
Manganese	ug/L	+/−20	49.0		48.0		2.03		MS
Molybdenum	ug/L	+/−20	52.4		53.0		1.03		MS
Nickel	ug/L	+/−20	48.6		47.7		1.89		MS
Potassium	ug/L	+/−20	5450		5600		2.78		MS
Selenium	ug/L	+/−20	50.2		50.2		.0319		MS
Silver	ug/L	+/−20	50.3		51.4		2.03		MS
Sodium	ug/L	+/−20	25400		25100		1.02		MS
Thallium	ug/L	+/−20	47.6		47.5		.181		MS
Thorium	ug/L	+/−20	50.2		49.5		1.51		MS
Uranium−235	ug/L	+/−20	0.405		0.405		0		MS
Uranium−238	ug/L	+/−20	55.3		55.3		.0394		MS
Vanadium	ug/L	+/−20	48.7		48.6		.242		MS
Zinc	ug/L	+/−20	49.3		49.0		.547		MS

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Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S17−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792951 **Duplicate ID:** 1204792952 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S17−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792954 **Duplicate ID:** 1204792955 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1970		1960		.632		MS
Antimony	ug/L	+/−20	51.3		51.4		.354		MS
Arsenic	ug/L	+/−20	50.6		50.2		.637		MS
Barium	ug/L	+/−20	69.1		69.0		.18		MS
Beryllium	ug/L	+/−20	51.4		52.7		2.46		MS
Cadmium	ug/L	+/−20	50.9		51.4		.835		MS
Calcium	ug/L	+/−20	21600		21800		.896		MS
Chromium	ug/L	+/−20	47.8		47.6		.4		MS
Cobalt	ug/L	+/−20	47.9		48.4		1.01		MS
Copper	ug/L	+/−20	47.1		47.4		.779		MS
Iron	ug/L	+/−20	1920		1920		.13		MS
Lead	ug/L	+/−20	50.8		50.0		1.53		MS
Magnesium	ug/L	+/−20	7700		7670		.332		MS
Manganese	ug/L	+/−20	48.4		48.3		.184		MS
Molybdenum	ug/L	+/−20	53.4		53.6		.411		MS
Nickel	ug/L	+/−20	47.7		48.4		1.53		MS
Potassium	ug/L	+/−20	5470		5480		.333		MS
Selenium	ug/L	+/−20	49.4		50.5		2.15		MS
Silver	ug/L	+/−20	51.7		51.4		.562		MS
Sodium	ug/L	+/−20	24600		25600		4.1		MS
Thallium	ug/L	+/−20	47.6		46.9		1.33		MS
Thorium	ug/L	+/−20	50.1		49.5		1.14		MS
Uranium−235	ug/L	+/−20	0.402		0.404		.471		MS
Uranium−238	ug/L	+/−20	56.5		54.7		3.24		MS
Vanadium	ug/L	+/−20	48.5		48.1		.901		MS
Zinc	ug/L	+/−20	49.7		49.9		.403		MS

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Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S17−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792954 **Duplicate ID:** 1204792955 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
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Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S28−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792959 **Duplicate ID:** 1204792960 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2000		2040		2.14		MS
Antimony	ug/L	+/−20	50.3		51.2		1.71		MS
Arsenic	ug/L	+/−20	48.7		48.9		.355		MS
Barium	ug/L	+/−20	55.1		56.4		2.26		MS
Beryllium	ug/L	+/−20	53.5		55.8		4.14		MS
Cadmium	ug/L	+/−20	50.3		51.2		1.81		MS
Calcium	ug/L	+/−20	8900		9210		3.44		MS
Chromium	ug/L	+/−20	47.9		49.0		2.33		MS
Cobalt	ug/L	+/−20	50.9		52.2		2.67		MS
Iron	ug/L	+/−20	1900		1950		2.9		MS
Lead	ug/L	+/−20	50.1		50.8		1.36		MS
Magnesium	ug/L	+/−20	3360		3440		2.53		MS
Manganese	ug/L	+/−20	48.4		48.9		1.04		MS
Molybdenum	ug/L	+/−20	51.7		52.2		1.02		MS
Nickel	ug/L	+/−20	47.8		49.0		2.45		MS
Potassium	ug/L	+/−20	3850		3890		.972		MS
Selenium	ug/L	+/−20	50.6		50.1		.963		MS
Silver	ug/L	+/−20	51.3		51.5		.358		MS
Sodium	ug/L	+/−20	11200		11600		2.87		MS
Thallium	ug/L	+/−20	48.0		48.2		.372		MS
Thorium	ug/L	+/−20	50.2		50.7		.975		MS
Uranium−235	ug/L	+/−20	0.360		0.364		1.08		MS
Uranium−238	ug/L	+/−20	49.9		50.1		.453		MS
Vanadium	ug/L	+/−20	48.6		49.4		1.71		MS
Zinc	ug/L	+/−20	49.9		49.8		.138		MS

***Analytical Methods:**

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Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S28−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792959 **Duplicate ID:** 1204792960 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
MS SW846 3005A/6020B									

Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S28−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792962 **Duplicate ID:** 1204792963 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2050		2030		.906		MS
Antimony	ug/L	+/−20	51.0		51.0		.00196		MS
Arsenic	ug/L	+/−20	49.1		49.3		.323		MS
Barium	ug/L	+/−20	56.4		57.8		2.53		MS
Beryllium	ug/L	+/−20	55.3		54.9		.72		MS
Cadmium	ug/L	+/−20	51.4		51.5		.276		MS
Calcium	ug/L	+/−20	9280		9160		1.25		MS
Chromium	ug/L	+/−20	49.6		56.5		13.1		MS
Cobalt	ug/L	+/−20	52.1		51.7		.795		MS
Iron	ug/L	+/−20	1950		1990		1.95		MS
Lead	ug/L	+/−20	51.2		51.8		1.21		MS
Magnesium	ug/L	+/−20	3510		3450		1.78		MS
Manganese	ug/L	+/−20	51.0		51.0		.0627		MS
Molybdenum	ug/L	+/−20	51.8		52.8		1.83		MS
Nickel	ug/L	+/−20	50.2		49.6		1.21		MS
Potassium	ug/L	+/−20	3770		3810		1.01		MS
Selenium	ug/L	+/−20	51.5		50.7		1.58		MS
Silver	ug/L	+/−20	51.9		52.4		.914		MS
Sodium	ug/L	+/−20	10900		10700		1.5		MS
Thallium	ug/L	+/−20	49.1		49.2		.246		MS
Thorium	ug/L	+/−20	51.3		52.0		1.31		MS
Uranium−235	ug/L	+/−20	0.371		0.370		.405		MS
Uranium−238	ug/L	+/−20	50.8		51.0		.443		MS
Vanadium	ug/L	+/−20	50.4		49.9		1.09		MS
Zinc	ug/L	+/−20	52.2		52.2		.105		MS

***Analytical Methods:**

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Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S28−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204792962 **Duplicate ID:** 1204792963 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
MS SW846 3005A/6020B									

Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S28−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204808625 **Duplicate ID:** 1204808626 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Copper	ug/L	+/−20	50.8		48.5		4.66		MS

***Analytical Methods:**
MS SW846 3005A/6020B

Metals
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Duplicate Sample Summary

SDG No.: 540208 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S28−04062021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204808628 **Duplicate ID:** 1204808629 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Copper	ug/L	+/−20	49.2		48.5		1.37		MS

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
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Laboratory Control Sample Summary

SDG NO. 540208

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204792950								
	Potassium	ug/L	2000	2190		110	80−120	MS
	Selenium	ug/L	50.0	48.1		96.2	80−120	MS
	Silver	ug/L	50.0	51.3		103	80−120	MS
	Sodium	ug/L	2000	2070		104	80−120	MS
	Thallium	ug/L	50.0	48.1		96.3	80−120	MS
	Thorium	ug/L	50.0	49.9		99.7	80−120	MS
	Uranium−235	ug/L	0.360	0.400		111	80−120	MS
	Uranium−238	ug/L	49.6	54.5		110	80−120	MS
	Vanadium	ug/L	50.0	47.3		94.5	80−120	MS
	Zinc	ug/L	50.0	48.4		96.9	80−120	MS
	Aluminum	ug/L	2000	1960		97.8	80−120	MS
	Antimony	ug/L	50.0	48.2		96.3	80−120	MS
	Arsenic	ug/L	50.0	47.0		93.9	80−120	MS
	Barium	ug/L	50.0	49.8		99.6	80−120	MS
	Beryllium	ug/L	50.0	52.4		105	80−120	MS
	Cadmium	ug/L	50.0	49.1		98.3	80−120	MS
	Calcium	ug/L	2000	2030		101	80−120	MS
	Chromium	ug/L	50.0	47.1		94.2	80−120	MS
	Cobalt	ug/L	50.0	47.3		94.7	80−120	MS
	Copper	ug/L	50.0	47.8		95.6	80−120	MS
	Iron	ug/L	2000	1900		94.8	80−120	MS
	Lead	ug/L	50.0	51.7		103	80−120	MS
	Magnesium	ug/L	2000	2240		112	80−120	MS
	Manganese	ug/L	50.0	47.5		95	80−120	MS
	Molybdenum	ug/L	50.0	50.3		101	80−120	MS
	Nickel	ug/L	50.0	47.3		94.6	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Laboratory Control Sample Summary

SDG NO. 540208

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204792958								
	Aluminum	ug/L	2000	1950		97.4	80−120	MS
	Antimony	ug/L	50.0	47.2		94.4	80−120	MS
	Arsenic	ug/L	50.0	46.7		93.4	80−120	MS
	Barium	ug/L	50.0	48.8		97.7	80−120	MS
	Beryllium	ug/L	50.0	51.9		104	80−120	MS
	Cadmium	ug/L	50.0	48.1		96.1	80−120	MS
	Calcium	ug/L	2000	2060		103	80−120	MS
	Chromium	ug/L	50.0	46.7		93.4	80−120	MS
	Cobalt	ug/L	50.0	46.3		92.6	80−120	MS
	Iron	ug/L	2000	1870		93.3	80−120	MS
	Lead	ug/L	50.0	48.7		97.4	80−120	MS
	Magnesium	ug/L	2000	1990		99.3	80−120	MS
	Manganese	ug/L	50.0	47.3		94.6	80−120	MS
	Molybdenum	ug/L	50.0	48.6		97.1	80−120	MS
	Nickel	ug/L	50.0	46.5		93.1	80−120	MS
	Potassium	ug/L	2000	2040		102	80−120	MS
	Selenium	ug/L	50.0	49.4		98.7	80−120	MS
	Silver	ug/L	50.0	49.3		98.7	80−120	MS
	Sodium	ug/L	2000	2080		104	80−120	MS
	Thallium	ug/L	50.0	46.2		92.4	80−120	MS
	Thorium	ug/L	50.0	48.2		96.3	80−120	MS
	Uranium−235	ug/L	0.360	0.356		99	80−120	MS
	Uranium−238	ug/L	49.6	48.4		97.4	80−120	MS
	Vanadium	ug/L	50.0	47.2		94.5	80−120	MS
	Zinc	ug/L	50.0	47.8		95.7	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 540208

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204808624								
	Copper	ug/L	50.0	59.1		118	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 540208 **Client ID** MW−S17−04062021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540208005 **Serial Dilution ID:** 1204792953

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1.84	J	5	U	40.998			MS
Arsenic	2	U	10	U				MS
Barium	19.8		17.9	J	9.447			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	19400		18200		5.834		20	MS
Chromium	3	U	15	U				MS
Cobalt	.3	U	1.5	U				MS
Copper	.3	U	1.5	U				MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	5450		5170		5.229		20	MS
Manganese	1	U	5	U				MS
Molybdenum	.268	J	1	U	189.179			MS
Nickel	.837	J	3	U	1.434			MS
Potassium	3300		3080		6.7			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	22700		21600		4.957		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.42		.465	J	10.741			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	16.5	U				MS

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 540208 **Client ID** MW−S17−04062021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540208005 **Serial Dilution ID:** 1204792953

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 540208 **Client ID** MW−S17−04062021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540208006 **Serial Dilution ID:** 1204792956

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1.99	J	5	U	26.445			MS
Arsenic	2	U	10	U				MS
Barium	20		19.9	J	.6			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	20200		19100		5.656		20	MS
Chromium	3	U	15	U				MS
Cobalt	.3	U	1.5	U				MS
Copper	.338	J	1.5	U	2.367			MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	5610		5410		3.416		20	MS
Manganese	1	U	5	U				MS
Molybdenum	.262	J	1	U	237.786			MS
Nickel	.864	J	3	U	24.421			MS
Potassium	3360		3170		5.541			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	23900		22100		7.487		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.345		.352	J	2.029			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	16.5	U				MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 540208 **Client ID** MW-S17-04062021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540208006 **Serial Dilution ID:** 1204792956

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 540208 **Client ID** MW-S28-04062021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540208011 **Serial Dilution ID:** 1204792961

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	5.38		5.28	J	1.84			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	6660		6730		.929		20	MS
Chromium	3	U	15	U				MS
Cobalt	3.92		4.06	J	3.444			MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	1310		1300		.985		20	MS
Manganese	1.13	J	5	U	17.699			MS
Molybdenum	.23	J	1	U	163.043			MS
Nickel	1.12	J	3	U	.179			MS
Potassium	1730		1630		5.625			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	8870		9090		2.415		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium-235	.01	U	.05	U				MS
Uranium-238	.067	U	.335	U				MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	16.5	U				MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 540208 **Client ID** MW-S28-04062021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540208012 **Serial Dilution ID:** 1204792964

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	5.22		5.2	J	.498			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	7020		6580		6.298		20	MS
Chromium	3	U	15	U				MS
Cobalt	3.77		3.66	J	2.973			MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	1400		1300		7.177		20	MS
Manganese	2.34	J	5	U	.555			MS
Molybdenum	.2	U	1	U				MS
Nickel	2.17		3	U	.462			MS
Potassium	1680		1610		4.328			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	8620		8390		2.741		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium-235	.01	U	.05	U				MS
Uranium-238	.067	U	.335	U				MS
Vanadium	3.3	U	16.5	U				MS
Zinc	5.48	J	16.5	U	75.087			MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 540208 **Client ID** MW−S28−04062021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540208011 **Serial Dilution ID:** 1204808627

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Copper	.3	U	1.5	U				MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 540208 **Client ID** MW−S28−04062021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540208012 **Serial Dilution ID:** 1204808630

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Copper	.665	J	1.5	U	19.549			MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 540208 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2113889							
1204792949	MB for batch 2113889	MB	G	12−APR−21	50mL	50mL	
1204792950	LCS for batch 2113889	LCS	G	12−APR−21	50mL	50mL	
1204792951	MW−S17−04062021S	MS	G	12−APR−21	50mL	50mL	
1204792954	MW−S17−04062021S	MS	G	12−APR−21	50mL	50mL	
1204792952	MW−S17−04062021SD	MSD	G	12−APR−21	50mL	50mL	
1204792955	MW−S17−04062021SD	MSD	G	12−APR−21	50mL	50mL	
540208001	HA20−CMT−5(OW)−04062021DUP	SAMPLE	G	12−APR−21	50mL	50mL	
540208002	HA20−CMT−5(OW)−04062021DUP	SAMPLE	G	12−APR−21	50mL	50mL	
540208003	MW−BS31−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208004	MW−BS31−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208005	MW−S17−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208006	MW−S17−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208007	MW−BS22−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208008	MW−BS22−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208009	MW−S22−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208010	MW−S22−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
Batch Number 2113891							
1204792957	MB for batch 2113891	MB	G	12−APR−21	50mL	50mL	
1204792958	LCS for batch 2113891	LCS	G	12−APR−21	50mL	50mL	

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METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 540208 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
1204792959	MW−S28−04062021S	MS	G	12−APR−21	50mL	50mL	
1204792962	MW−S28−04062021S	MS	G	12−APR−21	50mL	50mL	
1204792960	MW−S28−04062021SD	MSD	G	12−APR−21	50mL	50mL	
1204792963	MW−S28−04062021SD	MSD	G	12−APR−21	50mL	50mL	
540208011	MW−S28−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208012	MW−S28−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208013	MW−BS50−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208014	MW−BS50−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208015	HB−620−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208016	HB−620−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208017	HB−12−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208018	HB−12−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208019	MW−S39−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
540208020	MW−S39−04062021	SAMPLE	G	12−APR−21	50mL	50mL	
Batch Number 2121478							
1204808623	MB for batch 2121478	MB	G	29−APR−21	50mL	50mL	
1204808624	LCS for batch 2121478	LCS	G	29−APR−21	50mL	50mL	
1204808625	MW−S28−04062021S	MS	G	29−APR−21	50mL	50mL	
1204808628	MW−S28−04062021S	MS	G	29−APR−21	50mL	50mL	

SW846

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 540208 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
1204808626	MW−S28−04062021SD	MSD	G	29−APR−21	50mL	50mL	
1204808629	MW−S28−04062021SD	MSD	G	29−APR−21	50mL	50mL	
540208011	MW−S28−04062021	SAMPLE	G	29−APR−21	50mL	50mL	
540208012	MW−S28−04062021	SAMPLE	G	29−APR−21	50mL	50mL	
540208013	MW−BS50−04062021	SAMPLE	G	29−APR−21	50mL	50mL	
540208014	MW−BS50−04062021	SAMPLE	G	29−APR−21	50mL	50mL	
540208015	HB−620−04062021	SAMPLE	G	29−APR−21	50mL	50mL	
540208016	HB−620−04062021	SAMPLE	G	29−APR−21	50mL	50mL	
540208017	HB−12−04062021	SAMPLE	G	29−APR−21	50mL	50mL	
540208018	HB−12−04062021	SAMPLE	G	29−APR−21	50mL	50mL	
540208019	MW−S39−04062021	SAMPLE	G	29−APR−21	50mL	50mL	
540208020	MW−S39−04062021	SAMPLE	G	29−APR−21	50mL	50mL	

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS11 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-10

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	09:15:19										X																
S10	1	09:17:28										X																
S100	1	09:19:38										X																
ICV01	1	09:21:48										X																
ICB01	1	09:23:58										X																
CRDL01	1	09:26:08										X																
ICSA01	1	09:28:17										X																
ICSAB01	1	09:30:26										X																
CCV01	1	09:32:36										X																
CCB01	1	09:34:46										X																
LR01	1	09:36:56										X																
CCV02	1	09:39:06										X																
CCB02	1	09:41:16										X																
ZZZZZZ	1	09:43:27																										
ZZZZZZ	1	09:45:37																										
ZZZZZZ	1	09:47:46																										
ZZZZZZ	1	09:49:56																										
ZZZZZZ	1	09:52:06																										
ZZZZZZ	1	09:54:16																										
ZZZZZZ	5	09:56:25																										
CCV	1	09:58:36										X																
CCB	1	10:00:46										X																
ZZZZZZ	1	10:02:56																										
ZZZZZZ	1	10:05:06																										
ZZZZZZ	1	10:07:16																										
ZZZZZZ	1	10:09:26																										
ZZZZZZ	1	10:11:36																										
CCV03	1	10:13:47										X																
CCB03	1	10:15:58										X																
ZZZZZZ	1	10:18:09																										
ZZZZZZ	1	10:20:19																										
540208011	1	10:22:29										X																
1204808625	1	10:24:38										X																
1204808626	1	10:26:48										X																
ZZZZZZ	1	10:28:58																										
1204808627	5	10:31:08										X																
CCV04	1	10:33:19										X																
CCB04	1	10:35:29										X																
1204808623	1	10:37:41										X																
1204808624	1	10:39:50										X																
540208012	1	10:42:02										X																

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS11 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-10

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
1204808628	1	10:44:12										X																
1204808629	1	10:46:21										X																
ZZZZZZ	1	10:48:31																										
1204808630	5	10:50:41										X																
540208013	1	10:52:50										X																
540208014	1	10:55:00										X																
CCV05	1	10:57:12										X																
CCB05	1	10:59:22										X																
540208015	1	11:01:34										X																
540208016	1	11:03:44										X																
540208017	1	11:05:54										X																
540208018	1	11:08:04										X																
540208019	1	11:10:13										X																
540208020	1	11:12:23										X																
CCV06	1	11:14:35										X																
CCB06	1	11:16:45										X																

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 28-APR-21 **End Date:** 29-APR-21 **Data File:** 210428-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	17:27:33																							X	X		
S10	1	17:29:19																							X	X		
S100	1	17:31:06																							X	X		
ICV01	1	17:32:53																							X	X		
ICB01	1	17:34:40																							X	X		
CRDL01	1	17:36:28																							X	X		
ICSA01	1	17:38:17																							X	X		
ICSAB01	1	17:40:05																							X	X		
CCV01	1	17:41:53																							X	X		
CCB01	1	17:43:41																							X	X		
1204792957	1	17:45:28																							X	X		
1204792958	1	17:47:15																							X	X		
CCV02	1	17:49:02																							X	X		
CCB02	1	17:50:49																							X	X		
540208011	1	17:52:36																							X	X		
1204792959	1	17:54:23																							X	X		
1204792960	1	17:56:10																							X	X		
ZZZZZZ	1	17:57:56																										
1204792961	5	17:59:43																							X	X		
540208012	1	18:01:29																							X	X		
1204792962	1	18:03:16																							X	X		
1204792963	1	18:05:02																							X	X		
ZZZZZZ	1	18:06:49																										
1204792964	5	18:08:36																							X	X		
CCV03	1	18:10:24																							X	X		
CCB03	1	18:12:11																							X	X		
540208013	1	18:13:59																							X	X		
540208014	1	18:15:45																							X	X		
540208015	1	18:17:32																							X	X		
540208016	1	18:19:19																							X	X		
ZZZZZZ	1	18:21:05																										
ZZZZZZ	1	18:22:52																										
540208019	1	18:24:38																							X	X		
540208020	1	18:26:25																							X	X		
CCV04	1	18:28:12																							X	X		
CCB04	1	18:30:00																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540208

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 28-APR-21

End Date: 29-APR-21

Data File: 210428-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:34:11	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
S10	1	19:37:47	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
S100	1	19:41:24	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
ICV01	1	19:45:01	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
ICB01	1	19:48:37	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CRDL01	1	19:52:14	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
ICSA01	1	19:55:49	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
ICSAB01	1	19:59:25	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCV01	1	20:03:01	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCB01	1	20:06:37	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
LR01	1	20:10:14	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCV02	1	20:13:51	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCB02	1	20:17:27	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
ZZZZZZ	1	20:21:03																										
ZZZZZZ	1	20:24:40																										
ZZZZZZ	1	20:28:16																										
ZZZZZZ	1	20:31:53																										
ZZZZZZ	1	20:35:29																										
ZZZZZZ	1	20:39:06																										
ZZZZZZ	5	20:42:42																										
CCV	1	20:46:20	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCB	1	20:49:56	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
ZZZZZZ	1	20:53:32																										
ZZZZZZ	1	20:57:09																										
ZZZZZZ	1	21:00:46																										
ZZZZZZ	1	21:04:22																										
ZZZZZZ	1	21:07:59																										
ZZZZZZ	1	21:11:35																										
ZZZZZZ	1	21:15:12																										
CCV	1	21:18:50	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCB	1	21:22:26	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
ZZZZZZ	1	21:26:04																										
ZZZZZZ	1	21:29:40																										
ZZZZZZ	1	21:33:17																										
ZZZZZZ	1	21:36:54																										
ZZZZZZ	1	21:40:30																										
ZZZZZZ	1	21:44:07																										
CCV03	1	21:47:45	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCB03	1	21:51:22	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
1204792957	1	21:54:59	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
1204792958	1	21:58:36	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 28-APR-21 **End Date:** 29-APR-21 **Data File:** 210428-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCV04	1	22:02:14	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCB04	1	22:05:50	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208011	1	22:09:29	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
1204792959	1	22:13:05	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
1204792960	1	22:16:42	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
1204807972	1	22:20:18							X																			
1204792961	5	22:23:55	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208012	1	22:27:31	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
1204792962	1	22:31:08	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
1204792963	1	22:34:45	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
ZZZZZZ	1	22:38:21																										
1204792964	5	22:41:57	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCV05	1	22:45:35	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCB05	1	22:49:12	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208013	1	22:52:50	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208014	1	22:56:26	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208015	1	23:00:03	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208016	1	23:03:40	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208017	1	23:07:16	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208018	1	23:10:53	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208019	1	23:14:29	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
540208020	1	23:18:06	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCV06	1	23:21:44	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X
CCB06	1	23:25:21	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540208

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 28-APR-21

End Date: 29-APR-21

Data File: 210428-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	04:00:04																	X									
S10	1	04:03:38																	X									
S100	1	04:07:09																	X									
ICV01	1	04:10:43																	X									
ICB01	1	04:14:15																	X									
CRDL01	1	04:17:48																	X									
ICSA01	1	04:21:20																	X									
ICSAB01	1	04:24:51																	X									
CCV01	1	04:28:25																	X									
CCB01	1	04:31:57																	X									
LR01	1	04:35:31																	X									
CCV02	1	04:39:04																	X									
CCB02	1	04:42:36																	X									
1204792957	1	04:46:08																	X									
1204792958	1	04:49:40																	X									
CCV03	1	04:53:12																	X									
CCB03	1	04:56:44																	X									
540208011	1	05:00:16																	X									
1204792959	1	05:03:48																	X									
1204792960	1	05:07:19																	X									
ZZZZZZ	1	05:10:51																										
1204792961	5	05:14:22																	X									
540208012	1	05:17:53																	X									
1204792962	1	05:21:23																	X									
1204792963	1	05:24:54																	X									
ZZZZZZ	1	05:28:25																										
1204792964	5	05:31:57																	X									
CCV04	1	05:35:29																	X									
CCB04	1	05:39:02																	X									
540208013	1	05:42:34																	X									
540208014	1	05:46:06																	X									
540208015	1	05:49:37																	X									
540208016	1	05:53:09																	X									
540208017	1	05:56:41																	X									
540208018	1	06:00:13																	X									
540208019	1	06:03:44																	X									
540208020	1	06:07:16																	X									
CCV05	1	06:10:48																	X									
CCB05	1	06:14:20																	X									

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 29-APR-21 **End Date:** 29-APR-21 **Data File:** 210429-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	09:40:41																							X	X		
S10	1	09:42:27																							X	X		
S100	1	09:44:14																							X	X		
ICV01	1	09:46:01																							X	X		
ICB01	1	09:47:49																							X	X		
CRDL01	1	09:49:37																							X	X		
ICSA01	1	09:51:24																							X	X		
ICSAB01	1	09:53:12																							X	X		
CCV01	1	09:54:59																							X	X		
CCB01	1	09:56:46																							X	X		
ZZZZZZ	1	09:58:33																										
ZZZZZZ	1	10:00:19																										
ZZZZZZ	2	10:02:06																										
ZZZZZZ	10	10:03:53																										
ZZZZZZ	2	10:05:40																										
ZZZZZZ	10	10:07:27																										
CCV02	1	10:09:14																							X	X		
CCB02	1	10:11:02																							X	X		
540208017	2	10:14:24																							X			
540208017	10	10:16:11																								X		
540208018	2	10:17:56																							X			
540208018	10	10:19:43																								X		
CCV03	1	10:21:30																							X	X		
CCB03	1	10:23:18																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 01-MAY-21 **End Date:** 01-MAY-21 **Data File:** 210501-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	11:39:29	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
S10	1	11:43:06	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
S100	1	11:46:42	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
ICV01	1	11:50:19	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
ICB01	1	11:53:55	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CRDL01	1	11:57:31	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
ICSA01	1	12:01:07	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
ICSAB01	1	12:04:43	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCV01	1	12:08:20	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCB01	1	12:11:57	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
LR01	1	12:15:33	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCV02	1	12:19:10	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCB02	1	12:22:47	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
ZZZZZZ	1	12:26:24																										
ZZZZZZ	1	12:30:01																										
ZZZZZZ	1	12:33:37																										
ZZZZZZ	1	12:37:14																										
ZZZZZZ	1	12:40:50																										
ZZZZZZ	1	12:44:26																										
ZZZZZZ	1	12:48:03																										
ZZZZZZ	1	12:51:40																										
ZZZZZZ	5	12:55:17																										
CCV	1	12:58:54	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCB	1	13:02:31	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
ZZZZZZ	1	13:06:09																										
ZZZZZZ	1	13:09:46																										
ZZZZZZ	1	13:13:22																										
ZZZZZZ	1	13:16:59																										
ZZZZZZ	1	13:20:35																										
ZZZZZZ	1	13:24:12																										
ZZZZZZ	1	13:27:49																										
CCV	1	13:31:26	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCB	1	13:35:03	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
ZZZZZZ	1	13:38:41																										
ZZZZZZ	1	13:42:18																										
ZZZZZZ	1	13:45:55																										
ZZZZZZ	1	13:49:32																										
ZZZZZZ	1	13:53:08																										
ZZZZZZ	1	13:56:45																										
ZZZZZZ	1	14:00:22																										
ZZZZZZ	1	14:03:59																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 01-MAY-21 **End Date:** 01-MAY-21 **Data File:** 210501-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCV03	1	14:07:37	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCB03	1	14:11:14	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
1204792949	1	14:14:52	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
1204792950	1	14:18:29	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
540208001	1	14:22:06	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
540208002	1	14:25:43	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
540208003	1	14:29:19	X			X	X		X	X	X	X	X	X		X		X				X	X	X			X	
540208004	1	14:32:56	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCV04	1	14:36:34	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCB04	1	14:40:11	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
540208005	1	14:43:49	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
1204792951	1	14:47:26	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
1204792952	1	14:51:03	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
ZZZZZZ	1	14:54:39																										
1204792953	5	14:58:16	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
540208006	1	15:01:53	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
1204792954	1	15:05:30	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
1204792955	1	15:09:06	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
ZZZZZZ	1	15:12:43																										
1204792956	5	15:16:20	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCV05	1	15:19:58	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCB05	1	15:23:35	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
540208007	1	15:27:13	X	X	X	X	X	X		X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
540208008	1	15:30:50	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
540208009	1	15:34:27	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
540208010	1	15:38:04	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCV06	1	15:41:41	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X
CCB06	1	15:45:19	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 01-MAY-21 **End Date:** 01-MAY-21 **Data File:** 210501-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	15:56:10		X	X			X									X			X	X							X
S10	1	15:59:48		X	X			X									X			X	X							X
S100	1	16:03:25		X	X			X									X			X	X							X
ICV01	1	16:07:03		X	X			X									X			X	X							X
ICB01	1	16:10:41		X	X			X									X			X	X							X
CRDL01	1	16:14:18		X	X			X									X			X	X							X
ICSA01	1	16:17:56		X	X			X									X			X	X							X
ICSAB01	1	16:21:33		X	X			X									X			X	X							X
CCV01	1	16:25:11		X	X			X									X			X	X							X
CCB01	1	16:28:48		X	X			X									X			X	X							X
LR01	1	16:32:26		X	X			X									X			X	X							X
CCV02	1	16:36:04		X	X			X									X			X	X							X
CCB02	1	16:39:42		X	X			X									X			X	X							X
ZZZZZZ	1	16:43:19																										
ZZZZZZ	1	16:46:56																										
ZZZZZZ	1	16:50:32																										
ZZZZZZ	1	16:54:09																										
540208003	1	16:57:46		X	X			X									X			X	X							X
ZZZZZZ	1	17:01:23																										
CCV03	1	17:05:00		X	X			X									X			X	X							X
CCB03	1	17:08:37		X	X			X									X			X	X							X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 02-MAY-21 **End Date:** 03-MAY-21 **Data File:** 210502-8

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	12:12:58							X						X				X									
S10	1	12:14:56							X						X				X									
S100	1	12:16:55							X						X				X									
ICV01	1	12:18:53							X						X				X									
ICB01	1	12:20:51							X						X				X									
CRDL01	1	12:22:49							X						X				X									
ICSA01	1	12:24:47							X						X				X									
ICSAB01	1	12:26:45							X						X				X									
CCV01	1	12:28:43							X						X				X									
CCB01	1	12:30:42							X						X				X									
LR01	1	12:32:40							X						X				X									
CCV02	1	12:34:39							X						X				X									
CCB02	1	12:36:37							X						X				X									
ZZZZZZ	1	12:38:35																										
ZZZZZZ	1	12:40:34																										
ZZZZZZ	1	12:42:40																										
ZZZZZZ	1	12:44:38																										
CCV	1	12:46:37							X						X				X									
CCB	1	12:48:35							X						X				X									
ZZZZZZ	1	12:50:34																										
ZZZZZZ	1	12:52:32																										
ZZZZZZ	1	12:54:30																										
ZZZZZZ	1	12:56:28																										
ZZZZZZ	5	12:58:27																										
ZZZZZZ	10	13:00:25																										
ZZZZZZ	10	13:02:24																										
ZZZZZZ	10	13:04:22																										
ZZZZZZ	50	13:06:20																										
CCV	1	13:08:20							X						X				X									
CCB	1	13:10:18							X						X				X									
ZZZZZZ	1	13:12:18																										
ZZZZZZ	10	13:14:17																										
ZZZZZZ	1	13:16:15																										
ZZZZZZ	1	13:18:14																										
ZZZZZZ	1	13:20:12																										
ZZZZZZ	1	13:22:10																										
ZZZZZZ	1	13:24:08																										
ZZZZZZ	1	13:26:06																										
ZZZZZZ	1	13:28:04																										
ZZZZZZ	10	13:30:03																										
CCV	1	13:32:02							X						X				X									

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540208

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 02-MAY-21

End Date: 03-MAY-21

Data File: 210502-8

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB	1	13:34:01							X						X				X									
ZZZZZZ	1	13:36:00																										
ZZZZZZ	10	13:37:59																										
ZZZZZZ	1	13:39:58																										
ZZZZZZ	1	13:41:56																										
ZZZZZZ	1	13:43:54																										
ZZZZZZ	1	13:45:52																										
ZZZZZZ	1	13:47:50																										
ZZZZZZ	10	13:49:49																										
ZZZZZZ	1	13:51:48																										
ZZZZZZ	10	13:53:47																										
CCV03	1	13:55:47							X						X				X									
CCB03	1	13:57:45							X						X				X									
1204792949	1	13:59:45													X				X									
1204792950	1	14:01:43													X				X									
540208001	1	14:03:41													X				X									
540208002	1	14:05:39													X				X									
540208003	1	14:07:38													X				X									
540208004	1	14:09:36													X				X									
CCV04	1	14:11:35							X						X				X									
CCB04	1	14:13:34							X						X				X									
540208005	1	14:15:33													X				X									
1204792951	1	14:17:31													X				X									
1204792952	1	14:19:29													X				X									
ZZZZZZ	1	14:21:27																										
1204792953	5	14:23:25													X				X									
540208006	1	14:25:24													X				X									
1204792954	1	14:27:22													X				X									
1204792955	1	14:29:20													X				X									
ZZZZZZ	1	14:31:18																										
1204792956	5	14:33:16													X				X									
CCV05	1	14:35:16							X						X				X									
CCB05	1	14:37:14							X						X				X									
540208007	1	14:39:14													X				X									
540208007	10	14:41:14							X																			
540208008	1	14:43:14													X				X									
540208009	1	14:45:12													X				X									
540208010	1	14:47:10													X				X									
CCV06	1	14:49:09							X						X				X									
CCB06	1	14:51:08							X						X				X									

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540208

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 02-MAY-21 **End Date:** 03-MAY-21 **Data File:** 210502-9

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	08:59:54																							X	X		
S10	1	09:01:40																							X	X		
S100	1	09:03:27																							X	X		
ICV01	1	09:05:14																							X	X		
ICB01	1	09:07:01																							X	X		
CRDL01	1	09:08:49																							X	X		
ICSA01	1	09:10:37																							X	X		
ICSAB01	1	09:12:25																							X	X		
CCV01	1	09:14:13																							X	X		
CCB01	1	09:16:00																							X	X		
ZZZZZZ	1	09:17:48																										
ZZZZZZ	1	09:19:34																										
ZZZZZZ	1	09:21:21																										
ZZZZZZ	1	09:23:44																										
ZZZZZZ	1	09:25:31																										
ZZZZZZ	1	09:27:18																										
ZZZZZZ	1	09:29:04																										
ZZZZZZ	1	09:30:51																										
ZZZZZZ	5	09:32:38																										
CCV	1	09:34:26																							X	X		
CCB	1	09:36:13																							X	X		
ZZZZZZ	1	09:38:01																										
ZZZZZZ	1	09:39:47																										
ZZZZZZ	1	09:41:34																										
ZZZZZZ	1	09:43:21																										
ZZZZZZ	1	09:45:08																										
ZZZZZZ	1	09:46:55																										
ZZZZZZ	1	09:48:42																										
ZZZZZZ	1	09:50:28																										
ZZZZZZ	1	09:52:15																										
CCV	1	09:54:02																							X	X		
CCB	1	09:55:50																							X	X		
ZZZZZZ	50	09:57:37																										
ZZZZZZ	50	09:59:24																										
ZZZZZZ	100	10:01:11																										
ZZZZZZ	100	10:02:58																										
ZZZZZZ	1	10:04:46																										
ZZZZZZ	1	10:06:33																										
ZZZZZZ	1	10:08:19																										
ZZZZZZ	1	10:10:06																										
CCV02	1	10:11:54																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540208

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 02-MAY-21 **End Date:** 03-MAY-21 **Data File:** 210502-9

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB02	1	10:13:41																							X	X		
1204792949	1	10:15:29																							X	X		
1204792950	1	10:17:16																							X	X		
540208001	1	10:19:03																							X	X		
540208002	1	10:20:50																							X	X		
540208003	1	10:22:37																							X	X		
540208004	1	10:24:24																							X	X		
CCV03	1	10:26:11																							X	X		
CCB03	1	10:27:58																							X	X		
540208005	1	10:29:46																							X	X		
1204792951	1	10:31:32																							X	X		
1204792952	1	10:33:19																							X	X		
ZZZZZZ	1	10:35:06																										
1204792953	5	10:36:53																							X	X		
540208006	1	10:38:40																							X	X		
1204792954	1	10:40:27																							X	X		
1204792955	1	10:42:13																							X	X		
ZZZZZZ	1	10:44:00																										
1204792956	5	10:45:47																							X	X		
CCV04	1	10:47:34																							X	X		
CCB04	1	10:49:22																							X	X		
540208007	1	10:51:10																							X	X		
540208008	1	10:52:57																							X	X		
540208009	1	10:54:43																							X	X		
540208010	1	10:57:07																							X	X		
ZZZZZZ	5	10:58:54																										
ZZZZZZ	5	11:00:41																										
CCV05	1	11:02:28																							X	X		
CCB05	1	11:04:16																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
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Instrument Detection Limits

SDG NO. 540208

Contract: DMAX00801 **Lab Code:** **GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s):	**Verified on:**
ICPMS11	22−MAR−2021
ICPMS15	17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 540208

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS11

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

METALS
−12−
Linear Ranges

SDG NO. 540208

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2113889**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204792950	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204792950	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204792951	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204792951	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204792954	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204792954	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204792952	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204792952	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204792955	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204792955	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204792949 MB	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792950 LCS	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208001	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208002	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208003	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208004	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208005	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792953 SDILT (540208005)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792951 MS (540208005)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792952 MSD (540208005)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208006	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792956 SDILT (540208006)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792954 MS (540208006)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792955 MSD (540208006)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208007	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208008	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208009	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208010	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3265774	HYDROCHLORIC ACID	2.5 mL
3279375	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 91 C
Temperature within limits (Y/N)?: y
Thermometer ID: 118957
Hot Block ID: 8
Digestion tube lot #: 2012333

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2113891**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204792958	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204792958	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204792959	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204792959	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204792962	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204792962	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204792960	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204792960	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204792963	ICP-MS spiking soluiton A	UI210215-A	.25	mL
MSD	1204792963	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	**Prep Date**	**Matrix**	**Initial Volume (mL)**	**Hot Block Stop Date (date)**	**Final Volume (mL)**	**Prep Factor (mL/mL)**	**pH Check**
1204792957 MB	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792958 LCS	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208011	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792961 SDILT (540208011)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792959 MS (540208011)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792960 MSD (540208011)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208012	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792964 SDILT (540208012)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792962 MS (540208012)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
1204792963 MSD (540208012)	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208013	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208014	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208015	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208016	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208017	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208018	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208019	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2
540208020	12-APR-2021 09:30:56	Ground Water	50	04/12/21 15:30	50	1	<2

Reagent/Solvent Lot ID	**Description**	**Amount**
3265774	HYDROCHLORIC ACID	2.5 mL
3279375	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 90 C
Temperature within limits (Y/N)?: y
Thermometer ID: 12411
Hot Block ID: 14
Digestion tube lot #: 2012333

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2121478**
Analyst: Hannah Hatherly
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204808624	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204808624	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204808625	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204808625	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204808628	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204808628	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204808626	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204808626	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204808629	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204808629	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204808623 MB	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
1204808624 LCS	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208011 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
1204808627 - 2 SDILT (540208011)	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
1204808625 - 2 MS (540208011)	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
1204808626 - 2 MSD (540208011)	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208012 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
1204808630 - 2 SDILT (540208012)	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
1204808628 - 2 MS (540208012)	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
1204808629 - 2 MSD (540208012)	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208013 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208014 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208015 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208016 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208017 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208018 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208019 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2
540208020 - 2	29-APR-2021 16:22:09	Ground Water	50	04/29/21 22:22	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3279375	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 93 C
Temperature within limits (Y/N)?: y
Thermometer ID: 118957
Hot Block ID: 8
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 06, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 540450

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 10, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540450

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540450

May 06, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 10, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
540450001	MW-SD43-04082021
540450002	MW-SD43-04082021
540450003	MW-S64-04082021
540450004	MW-S64-04082021
540450005	MW-BS21-04082021
540450006	MW-BS21-04082021
540450007	MW-SD34-04082021
540450008	MW-SD34-04082021
540450009	MW-SD34-04082021DUP
540450010	MW-SD34-04082021DUP
540450011	BEW-1-04082021
540450012	BEW-1-04082021
540450013	ML-1-3-04082021
540450014	ML-1-3-04082021
540450015	MW-S38-04082021
540450016	MW-S38-04082021
540450017	HA20-CMT-2S-04082021
540450018	HA20-CMT-2S-04082021
540450019	SW-1-04082021
540450020	SW-1-04082021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]: 04082021
PO Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

GEL Laboratories LLC
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
Chain of Custody and Analytical Request

540450

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) (NI)	Dissolved Metals (6020A ICP-MS) (NI)	U-235/U-238 plus Total U Calc. (NI)	Comments: Note: extra sample is required for sample specific QC
MW-SD43-04082021	4/8/2021	13:25	N	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
MW-S64-04082021	4/8/2021	14:00	N/MS/MSD	Y	GW	U238		2	X	X	X	
MW-BS21-04082021	4/8/2021	14:15	N	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenie, Barium, Beryllium, Cadmium, Caleium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
MW-SD34-04082021	4/8/2021	14:20	N	Y	GW	U238		2	X	X	X	
MW-SD34-04082021DUP	4/8/2021	14:25	N	Y	GW	U238		2	X	X	X	
BEW-1-04082021	4/8/2021	15:10	N	Y	GW	U238		2	X	X	X	
ML-1-3-04082021	4/8/2021	15:38	N	Y	GW	U238		2	X	X	X	
MW-S38-04082021	4/8/2021	16:10	N	Y	GW	U238		2	X	X	X	U-235/U-238 plus Total U Cale. for Total and Dissolved
HA20-CMT-2S-04082021	4/8/2021	15:00	N	Y	GW	U238		2	X	X	X	
SW-1-04082021	4/8/2021	17:30	N	Y	GW	U238		2	X	X	X	

<-- Preservative Type (6)

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/9/21	11:00	1	[signature]	4/9/21	1100
2	[signature]	4/9/21	1600	2	[signature]	4/10/21	950
3				3			

TAT Requested: Normal: X Rush: ____ Specify: ____

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polyehlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via Na+. mm

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 540450
Received By: Stacy Boone	Date Received: 4/10/21
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:_____
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials (A) Date 4/12/21 Page 1 of 2

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC **SAMPLE RECEIPT & REVIEW CONTINUATION FORM**

Client: DMAX Received By: SB Date Received: 4/10/21 SDG/AR/COC/Work Order: 540450

7734	0170	1615	2°c
"	"	1707	3°c
"	"	1351	4°c
"	"	1590	5°c
7734	0445	7137	3°c
"	"	7089	3°c
"	"	6737	4°c
"	"	7090	5°c
"	"	7663	4°c

PM (or PMA) review: Initials CD Date 4/12/21 Page 2 of 2

Work Order Containers

Sample ID: **540450001**
Client Sample ID: **MW−SD43−04082021**
Description: **Ground Water**

Label: 540450001.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
13−APR−21 08:41:29	Caroline Gause	Changed batch_id from 2114307 to
13−APR−21 08:41:29	Caroline Gause	Changed sample location from Inorganic Prep to Main Cooler (Radioactive)

Label: 540450001.01.01 **Type: New Undefined**

04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450002**
Client Sample ID: **MW−SD43−04082021**
Description: **Dissolved Ground Water**

Label: 540450002.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
13−APR−21 08:41:30	Caroline Gause	Changed batch_id from 2114307 to
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Inorganic Prep to Main Cooler (Radioactive)

Label: 540450002.01.01 **Type: New Undefined**

04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450003**
Client Sample ID: **MW−S64−04082021**
Description: **Ground Water**

Label: 540450003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114307 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540450003**
Client Sample ID: **MW−S64−04082021**
Description: **Ground Water**

Label: 540450003.01.01 **Type: New Undefined**

04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450004**
Client Sample ID: **MW−S64−04082021**
Description: **Dissolved Ground Water**

Label: 540450004.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450004.01.01 **Type: New Undefined**

05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450005**
Client Sample ID: **MW−BS21−04082021**
Description: **Ground Water**

Label: 540450005.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114307 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450005.01.01 **Type: New Undefined**

04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540450006**
Client Sample ID: **MW−BS21−04082021**
Description: **Dissolved Ground Water**

Label: 540450006.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114307 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450006.01.01 **Type: New Undefined**

04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450007**
Client Sample ID: **MW−SD34−04082021**
Description: **Ground Water**

Label: 540450007.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114307 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450007.01.01 **Type: New Undefined**

04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450008**
Client Sample ID: **MW−SD34−04082021**
Description: **Dissolved Ground Water**

Label: 540450008.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114307 to

Work Order Containers

Sample ID: **540450008**
Client Sample ID: **MW−SD34−04082021**
Description: **Dissolved Ground Water**

Label: 540450008.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450008.01.01	**Type: New Undefined**	
04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450009**
Client Sample ID: **MW−SD34−04082021DUP**
Description: **Ground Water**

Label: 540450009.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114307 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450009.01.01	**Type: New Undefined**	
04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450010**
Client Sample ID: **MW−SD34−04082021DUP**
Description: **Dissolved Ground Water**

Label: 540450010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114307 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540450010**
Client Sample ID: **MW−SD34−04082021DUP**
Description: **Dissolved Ground Water**

Label: 540450010.01.01 **Type: New Undefined**

04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450011**
Client Sample ID: **BEW−1−04082021**
Description: **Ground Water**

Label: 540450011.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:10:18	Ridge Gleaton	Transfered custody to batch 2114307
12−APR−21 18:10:18	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114307 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:29	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450011.01.01 **Type: New Undefined**

04−MAY−21 17:36:19	Paul Boyd	Transfered custody to batch 2114309
04−MAY−21 17:36:19	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450012**
Client Sample ID: **BEW−1−04082021**
Description: **Dissolved Ground Water**

Label: 540450012.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:29	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450012.01.01 **Type: New Undefined**

05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: 540450013
Client Sample ID: ML−1−3−04082021
Description: Ground Water

Label: 540450013.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:29	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450013.01.01	Type: New Undefined	
05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540450014
Client Sample ID: ML−1−3−04082021
Description: Dissolved Ground Water

Label: 540450014.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450014.01.01	Type: New Undefined	
05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 540450015
Client Sample ID: MW−S38−04082021
Description: Ground Water

Label: 540450015.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to

Work Order Containers

Sample ID: **540450015**
Client Sample ID: **MW−S38−04082021**
Description: **Ground Water**

Label: 540450015.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540450015.01.01	**Type: New Undefined**	
05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450016**
Client Sample ID: **MW−S38−04082021**
Description: **Dissolved Ground Water**

Label: 540450016.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540450016.01.01	**Type: New Undefined**	
05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450017**
Client Sample ID: **HA20−CMT−2S−04082021**
Description: **Ground Water**

Label: 540450017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540450017**
Client Sample ID: **HA20−CMT−2S−04082021**
Description: **Ground Water**

Label: 540450017.01.01	**Type: New Undefined**	
05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450018**
Client Sample ID: **HA20−CMT−2S−04082021**
Description: **Dissolved Ground Water**

Label: 540450018.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:09:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450018.01.01	**Type: New Undefined**	
05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540450019**
Client Sample ID: **SW−1−04082021**
Description: **Ground Water**

Label: 540450019.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:12:07	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450019.01.01	**Type: New Undefined**	
05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540450020**
Client Sample ID: **SW−1−04082021**
Description: **Dissolved Ground Water**

Label: 540450020.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:12:07	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:09:35	Ridge Gleaton	Transfered custody to batch 2114311
12−APR−21 18:09:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114311 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540450020.01.01 **Type: New Undefined**

05−MAY−21 17:03:51	Paul Boyd	Transfered custody to batch 2114313
05−MAY−21 17:03:51	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 06 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 540450

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 34
Analytical Batches: 2114309 and 2114313

Product: **Inorganic Calculations**
Analytical Method: SW846 6020
Analytical Procedure: GL-GC-E-107 REV# 10
Analytical Batch: 2125104

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batches: 2114307 and 2114311

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
540450001	MW-SD43-04082021
540450002	MW-SD43-04082021
540450003	MW-S64-04082021
540450004	MW-S64-04082021
540450005	MW-BS21-04082021
540450006	MW-BS21-04082021
540450007	MW-SD34-04082021
540450008	MW-SD34-04082021
540450009	MW-SD34-04082021DUP
540450010	MW-SD34-04082021DUP
540450011	BEW-1-04082021
540450012	BEW-1-04082021
540450013	ML-1-3-04082021
540450014	ML-1-3-04082021
540450015	MW-S38-04082021
540450016	MW-S38-04082021
540450017	HA20-CMT-2S-04082021
540450018	HA20-CMT-2S-04082021
540450019	SW-1-04082021
540450020	SW-1-04082021
1204793758	Method Blank (MB)**ICP-MS**
1204793768	Method Blank (MB)**ICP-MS**
1204793759	Laboratory Control Sample (LCS)
1204793769	Laboratory Control Sample (LCS)
1204793762	540450003(MW-S64-04082021L) Serial Dilution (SD)
1204793772	540450004(MW-S64-04082021L) Serial Dilution (SD)
1204793760	540450003(MW-S64-04082021S) Matrix Spike (MS)
1204793770	540450004(MW-S64-04082021S) Matrix Spike (MS)

1204793761 540450003(MW-S64-04082021SD) Matrix Spike Duplicate (MSD)
1204793771 540450004(MW-S64-04082021SD) Matrix Spike Duplicate (MSD)

Samples 540450001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 540450007 (MW-SD34-04082021), 540450008 (MW-SD34-04082021), 540450009 (MW-SD34-04082021DUP), 540450010 (MW-SD34-04082021DUP), 540450011 (BEW-1-04082021), 540450012 (BEW-1-04082021), 540450014 (ML-1-3-04082021), 540450015 (MW-S38-04082021) and 540450016 (MW-S38-04082021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	540450								
	007	008	009	010	011	012	014	015	016
Calcium	10X	10X	10X	10X	10X	10X	1X	1X	1X
Magnesium	1X	1X	1X	1X	1X	10X	10X	1X	1X
Manganese	1X	1X	1X	1X	1X	1X	1X	10X	10X
Uranium-235	1X	1X	1X	1X	2X	2X	1X	1X	1X
Uranium-238	1X	1X	1X	1X	2X	2X	1X	1X	1X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 540450 GEL Work Order: 540450

The Qualifiers in this report are defined as follows:

*   Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
**   Indicates analyte is a surrogate compound.
J   Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U   Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name:** **Jamie Johnson**

Date: **07 MAY 2021** **Title:** **Group Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450001 **BASIS:** As Received **DATE COLLECTED** 08−APR−21

CLIENT ID: MW−SD43−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	28.0	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−38−2	Arsenic	2.94	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−39−3	Barium	10.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−70−2	Calcium	24300	ug/L		80.0	200	200	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−48−4	Cobalt	1.21	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7439−89−6	Iron	809	ug/L		33.0	100	100	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7439−95−4	Magnesium	7870	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7439−96−5	Manganese	47.3	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7439−98−7	Molybdenum	0.496	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−02−0	Nickel	1.07	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−09−7	Potassium	4700	ug/L		80.0	300	300	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−23−5	Sodium	14600	ug/L		80.0	250	250	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−61−1	Total Uranium	0.0940	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/04/21 18:15	210504−1	2114309
7440−61−1	Uranium−238	0.0940	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/04/21 18:15	210504−1	2114309
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:16	210504−3	2114309
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:16	210504−3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450002 **BASIS:** Filtered **DATE COLLECTED** 08-APR-21

CLIENT ID: MW-SD43-04082021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-39-3	Barium	10.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-70-2	Calcium	25300	ug/L		80.0	200	200	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-48-4	Cobalt	1.03	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7439-89-6	Iron	422	ug/L		33.0	100	100	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7439-95-4	Magnesium	8110	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7439-96-5	Manganese	37.9	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7439-98-7	Molybdenum	0.433	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-02-0	Nickel	0.987	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-09-7	Potassium	4830	ug/L		80.0	300	300	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-23-5	Sodium	15300	ug/L		80.0	250	250	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/04/21 18:17	210504-1	2114309
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/04/21 18:17	210504-1	2114309
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:20	210504-3	2114309
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:20	210504-3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450003 **BASIS:** As Received **DATE COLLECTED** 08−APR−21

CLIENT ID: MW−S64−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	195	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−39−3	Barium	7.60	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−70−2	Calcium	7720	ug/L		80.0	200	200	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−48−4	Cobalt	0.847	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−50−8	Copper	84.0	ug/L		0.300	2.00	2.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7439−89−6	Iron	222	ug/L		33.0	100	100	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7439−95−4	Magnesium	1730	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7439−96−5	Manganese	13.8	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7439−98−7	Molybdenum	1.53	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−02−0	Nickel	2.56	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−09−7	Potassium	1700	ug/L		80.0	300	300	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−23−5	Sodium	9780	ug/L		80.0	250	250	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−61−1	Total Uranium	16.0	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0349	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/04/21 18:19	210504−1	2114309
7440−61−1	Uranium−238	16.0	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/04/21 18:19	210504−1	2114309
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:23	210504−3	2114309
7440−66−6	Zinc	5.02	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:23	210504−3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450004 **BASIS:** Filtered **DATE COLLECTED** 08−APR−21

CLIENT ID: MW−S64−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−39−3	Barium	6.42	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−70−2	Calcium	7290	ug/L		80.0	200	200	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−48−4	Cobalt	0.764	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−50−8	Copper	68.5	ug/L		0.300	2.00	2.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/06/21 20:35	210506−16	2114313
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7439−95−4	Magnesium	1560	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7439−96−5	Manganese	14.4	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7439−98−7	Molybdenum	1.78	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−02−0	Nickel	2.40	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−09−7	Potassium	1610	ug/L		80.0	300	300	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−23−5	Sodium	9600	ug/L		80.0	250	250	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−61−1	Total Uranium	11.3	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0249	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:08	210506−11	2114313
7440−61−1	Uranium−238	11.3	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:08	210506−11	2114313
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 18:57	210505−10	2114313
7440−66−6	Zinc	8.75	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 18:57	210505−10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450005 **BASIS:** As Received **DATE COLLECTED** 08−APR−21

CLIENT ID: MW−BS21−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	141	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−36−0	Antimony	1.32	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−38−2	Arsenic	2.02	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−39−3	Barium	45.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−70−2	Calcium	42400	ug/L		80.0	200	200	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−47−3	Chromium	5.31	ug/L	J	3.00	10.0	10.0	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−48−4	Cobalt	0.392	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−50−8	Copper	1.57	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7439−89−6	Iron	386	ug/L		33.0	100	100	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7439−95−4	Magnesium	10900	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7439−96−5	Manganese	133	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7439−98−7	Molybdenum	3.03	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−02−0	Nickel	1.19	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−09−7	Potassium	4270	ug/L		80.0	300	300	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−23−5	Sodium	21500	ug/L		80.0	250	250	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−61−1	Total Uranium	6.29	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0443	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/04/21 18:31	210504−1	2114309
7440−61−1	Uranium−238	6.24	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/04/21 18:31	210504−1	2114309
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:49	210504−3	2114309
7440−66−6	Zinc	9.22	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:49	210504−3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450006 **BASIS:** Filtered **DATE COLLECTED** 08−APR−21

CLIENT ID: MW−BS21−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−39−3	Barium	42.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−70−2	Calcium	43400	ug/L		80.0	200	200	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−50−8	Copper	0.840	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7439−89−6	Iron	56.8	ug/L	J	33.0	100	100	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7439−95−4	Magnesium	11000	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7439−96−5	Manganese	70.3	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7439−98−7	Molybdenum	2.87	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−09−7	Potassium	4420	ug/L		80.0	300	300	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−23−5	Sodium	21800	ug/L		80.0	250	250	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−61−1	Total Uranium	5.95	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0431	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/04/21 18:33	210504−1	2114309
7440−61−1	Uranium−238	5.91	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/04/21 18:33	210504−1	2114309
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:52	210504−3	2114309
7440−66−6	Zinc	5.49	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:52	210504−3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450007 **BASIS:** As Received **DATE COLLECTED** 08-APR-21

CLIENT ID: MW-SD34-04082021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-38-2	Arsenic	2.21	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-39-3	Barium	27.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-70-2	Calcium	129000	ug/L		800	2000	2000	10	MS	PRB	05/05/21 12:43	210505-6	2114309
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-48-4	Cobalt	4.66	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7439-89-6	Iron	7980	ug/L		33.0	100	100	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7439-95-4	Magnesium	37700	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7439-96-5	Manganese	843	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7439-98-7	Molybdenum	0.339	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-02-0	Nickel	9.88	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-09-7	Potassium	11900	ug/L		80.0	300	300	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-23-5	Sodium	43700	ug/L		80.0	250	250	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-61-1	Total Uranium	9.01	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117-96-1	Uranium-235	0.0640	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/04/21 18:35	210504-1	2114309
7440-61-1	Uranium-238	8.94	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/04/21 18:35	210504-1	2114309
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:56	210504-3	2114309
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 01:56	210504-3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450008 **BASIS:** Filtered **DATE COLLECTED** 08−APR−21

CLIENT ID: MW−SD34−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−38−2	Arsenic	2.01	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−39−3	Barium	26.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−70−2	Calcium	126000	ug/L		800	2000	2000	10	MS	PRB	05/05/21 12:45	210505−6	2114309
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−48−4	Cobalt	4.52	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7439−89−6	Iron	7700	ug/L		33.0	100	100	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7439−95−4	Magnesium	36700	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7439−96−5	Manganese	812	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7439−98−7	Molybdenum	0.313	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−02−0	Nickel	9.44	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−09−7	Potassium	11400	ug/L		80.0	300	300	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−23−5	Sodium	42500	ug/L		80.0	250	250	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−61−1	Total Uranium	8.80	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0638	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/04/21 18:37	210504−1	2114309
7440−61−1	Uranium−238	8.74	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/04/21 18:37	210504−1	2114309
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 02:00	210504−3	2114309
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 02:00	210504−3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450009 **BASIS:** As Received **DATE COLLECTED** 08−APR−21

CLIENT ID: MW−SD34−04082021DUP **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−38−2	Arsenic	2.21	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−39−3	Barium	27.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−70−2	Calcium	125000	ug/L		800	2000	2000	10	MS	PRB	05/05/21 12:47	210505−6	2114309
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−48−4	Cobalt	4.51	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7439−89−6	Iron	7730	ug/L		33.0	100	100	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7439−95−4	Magnesium	36300	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7439−96−5	Manganese	804	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7439−98−7	Molybdenum	0.306	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−02−0	Nickel	9.39	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−09−7	Potassium	11400	ug/L		80.0	300	300	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−23−5	Sodium	42400	ug/L		80.0	250	250	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−61−1	Total Uranium	9.00	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0636	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/04/21 18:39	210504−1	2114309
7440−61−1	Uranium−238	8.94	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/04/21 18:39	210504−1	2114309
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 02:03	210504−3	2114309
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 02:03	210504−3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450010 **BASIS:** Filtered **DATE COLLECTED** 08-APR-21

CLIENT ID: MW-SD34-04082021DUP **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-38-2	Arsenic	2.10	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-39-3	Barium	27.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-70-2	Calcium	123000	ug/L		800	2000	2000	10	MS	PRB	05/05/21 12:49	210505-6	2114309
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-48-4	Cobalt	4.45	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7439-89-6	Iron	7520	ug/L		33.0	100	100	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7439-95-4	Magnesium	36400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7439-96-5	Manganese	798	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7439-98-7	Molybdenum	0.320	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-02-0	Nickel	9.42	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-09-7	Potassium	11400	ug/L		80.0	300	300	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-23-5	Sodium	41900	ug/L		80.0	250	250	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-61-1	Total Uranium	8.65	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117-96-1	Uranium-235	0.0597	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/04/21 18:40	210504-1	2114309
7440-61-1	Uranium-238	8.59	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/04/21 18:40	210504-1	2114309
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 02:07	210504-3	2114309
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 02:07	210504-3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450011 **BASIS:** As Received **DATE COLLECTED** 08−APR−21

CLIENT ID: BEW−1−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	48.7	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−36−0	Antimony	1.32	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−38−2	Arsenic	2.18	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−39−3	Barium	14.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−70−2	Calcium	56000	ug/L		800	2000	2000	10	MS	PRB	05/05/21 12:51	210505−6	2114309
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−48−4	Cobalt	0.321	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−50−8	Copper	0.314	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7439−89−6	Iron	3410	ug/L		33.0	100	100	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7439−95−4	Magnesium	17200	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7439−96−5	Manganese	465	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7439−98−7	Molybdenum	47.9	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−02−0	Nickel	2.44	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−09−7	Potassium	8320	ug/L		80.0	300	300	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−23−5	Sodium	47700	ug/L		80.0	250	250	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−61−1	Total Uranium	135	ug/L		0.134	0.400	0.400			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.987	ug/L		0.0200	0.140	0.140	2	MS	PRB	05/05/21 07:49	210504−5	2114309
7440−61−1	Uranium−238	134	ug/L		0.134	0.400	0.400	2	MS	PRB	05/05/21 07:49	210504−5	2114309
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 02:10	210504−3	2114309
7440−66−6	Zinc	22.5	ug/L		3.30	20.0	20.0	1	MS	PRB	05/05/21 02:10	210504−3	2114309

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114309	2114307	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450012 **BASIS:** Filtered **DATE COLLECTED** 08-APR-21

CLIENT ID: BEW-1-04082021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-36-0	Antimony	1.23	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-39-3	Barium	12.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-70-2	Calcium	56900	ug/L		800	2000	2000	10	MS	PRB	05/06/21 16:15	210506-13	2114313
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7439-89-6	Iron	127	ug/L		33.0	100	100	1	MS	PRB	05/06/21 20:49	210506-16	2114313
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7439-95-4	Magnesium	18700	ug/L		100	300	300	10	MS	PRB	05/06/21 16:15	210506-13	2114313
7439-96-5	Manganese	417	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7439-98-7	Molybdenum	49.6	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-02-0	Nickel	1.10	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-09-7	Potassium	8270	ug/L		80.0	300	300	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-23-5	Sodium	48100	ug/L		80.0	250	250	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-61-1	Total Uranium	132	ug/L		0.134	0.400	0.400			JJ2	05/07/21 14:26		2125104
15117-96-1	Uranium-235	0.936	ug/L		0.0200	0.140	0.140	2	MS	PRB	05/06/21 11:37	210506-11	2114313
7440-61-1	Uranium-238	131	ug/L		0.134	0.400	0.400	2	MS	PRB	05/06/21 11:37	210506-11	2114313
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:23	210505-10	2114313
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:23	210505-10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450013 **BASIS:** As Received **DATE COLLECTED** 08-APR-21

CLIENT ID: ML-1-3-04082021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2470	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-38-2	Arsenic	5.86	ug/L		2.00	5.00	5.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-39-3	Barium	22.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-41-7	Beryllium	0.704	ug/L		0.200	0.500	0.500	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-70-2	Calcium	38100	ug/L		80.0	200	200	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-48-4	Cobalt	0.813	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-50-8	Copper	3.09	ug/L		0.300	2.00	2.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7439-89-6	Iron	3270	ug/L		33.0	100	100	1	MS	PRB	05/06/21 20:50	210506-16	2114313
7439-92-1	Lead	17.1	ug/L		0.500	2.00	2.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7439-95-4	Magnesium	7760	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7439-96-5	Manganese	134	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7439-98-7	Molybdenum	2.69	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-02-0	Nickel	2.35	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-09-7	Potassium	4830	ug/L		80.0	300	300	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-23-5	Sodium	7850	ug/L		80.0	250	250	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-29-1	Thorium	4.76	ug/L		0.700	2.00	2.00	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-61-1	Total Uranium	10.6	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117-96-1	Uranium-235	0.0744	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:23	210506-11	2114313
7440-61-1	Uranium-238	10.5	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:23	210506-11	2114313
7440-62-2	Vanadium	4.09	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:26	210505-10	2114313
7440-66-6	Zinc	21.0	ug/L		3.30	20.0	20.0	1	MS	PRB	05/05/21 19:26	210505-10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450014 **BASIS:** Filtered **DATE COLLECTED** 08−APR−21

CLIENT ID: ML−1−3−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	9580	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−38−2	Arsenic	8.30	ug/L		2.00	5.00	5.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−39−3	Barium	34.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−41−7	Beryllium	1.30	ug/L		0.200	0.500	0.500	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−70−2	Calcium	44100	ug/L		80.0	200	200	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−48−4	Cobalt	1.62	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−50−8	Copper	7.01	ug/L		0.300	2.00	2.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7439−89−6	Iron	7130	ug/L		33.0	100	100	1	MS	PRB	05/06/21 20:52	210506−16	2114313
7439−92−1	Lead	31.5	ug/L		0.500	2.00	2.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7439−95−4	Magnesium	10800	ug/L		100	300	300	10	MS	PRB	05/06/21 16:19	210506−13	2114313
7439−96−5	Manganese	180	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7439−98−7	Molybdenum	2.36	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−02−0	Nickel	4.84	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−09−7	Potassium	5170	ug/L		80.0	300	300	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−23−5	Sodium	7570	ug/L		80.0	250	250	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−29−1	Thorium	18.2	ug/L		0.700	2.00	2.00	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−61−1	Total Uranium	15.2	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.109	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:24	210506−11	2114313
7440−61−1	Uranium−238	15.1	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:24	210506−11	2114313
7440−62−2	Vanadium	7.16	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:30	210505−10	2114313
7440−66−6	Zinc	37.0	ug/L		3.30	20.0	20.0	1	MS	PRB	05/05/21 19:30	210505−10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450015 **BASIS:** As Received **DATE COLLECTED** 08−APR−21

CLIENT ID: MW−S38−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	125	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−39−3	Barium	29.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−43−9	Cadmium	0.548	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−70−2	Calcium	26100	ug/L		80.0	200	200	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−48−4	Cobalt	18.6	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−50−8	Copper	2.06	ug/L		0.300	2.00	2.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7439−89−6	Iron	173	ug/L		33.0	100	100	1	MS	PRB	05/06/21 20:54	210506−16	2114313
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7439−95−4	Magnesium	6420	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7439−96−5	Manganese	3170	ug/L		10.0	50.0	50.0	10	MS	PRB	05/06/21 16:22	210506−13	2114313
7439−98−7	Molybdenum	0.241	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−02−0	Nickel	18.3	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−09−7	Potassium	4600	ug/L		80.0	300	300	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−23−5	Sodium	30300	ug/L		80.0	250	250	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−61−1	Total Uranium	0.128	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:26	210506−11	2114313
7440−61−1	Uranium−238	0.128	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:26	210506−11	2114313
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:33	210505−10	2114313
7440−66−6	Zinc	4.85	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:33	210505−10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450016 **BASIS:** Filtered **DATE COLLECTED** 08-APR-21

CLIENT ID: MW-S38-04082021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-39-3	Barium	28.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-43-9	Cadmium	0.500	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-70-2	Calcium	25300	ug/L		80.0	200	200	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-48-4	Cobalt	16.6	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-50-8	Copper	1.38	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7439-89-6	Iron	33.5	ug/L	J	33.0	100	100	1	MS	PRB	05/06/21 20:56	210506-16	2114313
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7439-95-4	Magnesium	6110	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7439-96-5	Manganese	2990	ug/L		10.0	50.0	50.0	10	MS	PRB	05/06/21 16:26	210506-13	2114313
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-02-0	Nickel	17.4	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-09-7	Potassium	4410	ug/L		80.0	300	300	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-23-5	Sodium	29600	ug/L		80.0	250	250	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-61-1	Total Uranium	0.0731	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:28	210506-11	2114313
7440-61-1	Uranium-238	0.0731	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:28	210506-11	2114313
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:37	210505-10	2114313
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:37	210505-10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450017 **BASIS:** As Received **DATE COLLECTED** 08−APR−21

CLIENT ID: HA20−CMT−2S−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	294	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−38−2	Arsenic	2.07	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−39−3	Barium	27.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−70−2	Calcium	24000	ug/L		80.0	200	200	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−48−4	Cobalt	13.3	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−50−8	Copper	1.31	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7439−89−6	Iron	780	ug/L		33.0	100	100	1	MS	PRB	05/06/21 20:58	210506−16	2114313
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7439−95−4	Magnesium	4290	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7439−96−5	Manganese	654	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7439−98−7	Molybdenum	36.8	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−02−0	Nickel	11.3	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−09−7	Potassium	6410	ug/L		80.0	300	300	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−23−5	Sodium	48200	ug/L		80.0	250	250	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−61−1	Total Uranium	1.69	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:30	210506−11	2114313
7440−61−1	Uranium−238	1.69	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:30	210506−11	2114313
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:41	210505−10	2114313
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:41	210505−10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450018 **BASIS:** Filtered **DATE COLLECTED** 08−APR−21

CLIENT ID: HA20−CMT−2S−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	88.4	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−39−3	Barium	26.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−70−2	Calcium	24200	ug/L		80.0	200	200	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−48−4	Cobalt	12.9	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−50−8	Copper	0.451	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7439−89−6	Iron	544	ug/L		33.0	100	100	1	MS	PRB	05/06/21 21:00	210506−16	2114313
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7439−95−4	Magnesium	4260	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7439−96−5	Manganese	634	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7439−98−7	Molybdenum	35.9	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−02−0	Nickel	11.1	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−09−7	Potassium	6370	ug/L		80.0	300	300	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−23−5	Sodium	47400	ug/L		80.0	250	250	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−61−1	Total Uranium	1.88	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:31	210506−11	2114313
7440−61−1	Uranium−238	1.88	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:31	210506−11	2114313
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:44	210505−10	2114313
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:44	210505−10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450019 **BASIS:** As Received **DATE COLLECTED** 08−APR−21

CLIENT ID: SW−1−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−39−3	Barium	34.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−70−2	Calcium	19100	ug/L		80.0	200	200	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−50−8	Copper	15.5	ug/L		0.300	2.00	2.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7439−89−6	Iron	8130	ug/L		33.0	100	100	1	MS	PRB	05/06/21 21:02	210506−16	2114313
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7439−95−4	Magnesium	4460	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7439−96−5	Manganese	516	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7439−98−7	Molybdenum	0.363	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−09−7	Potassium	2550	ug/L		80.0	300	300	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−23−5	Sodium	23900	ug/L		80.0	250	250	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:33	210506−11	2114313
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:33	210506−11	2114313
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:48	210505−10	2114313
7440−66−6	Zinc	20.8	ug/L		3.30	20.0	20.0	1	MS	PRB	05/05/21 19:48	210505−10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540450 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540450020 **BASIS:** Filtered **DATE COLLECTED** 08−APR−21

CLIENT ID: SW−1−04082021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−39−3	Barium	31.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−70−2	Calcium	17800	ug/L		80.0	200	200	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−50−8	Copper	5.32	ug/L		0.300	2.00	2.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7439−89−6	Iron	2210	ug/L		33.0	100	100	1	MS	PRB	05/06/21 21:03	210506−16	2114313
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7439−95−4	Magnesium	4230	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7439−96−5	Manganese	475	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−09−7	Potassium	2370	ug/L		80.0	300	300	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−23−5	Sodium	22300	ug/L		80.0	250	250	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/07/21 14:26		2125104
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:35	210506−11	2114313
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:35	210506−11	2114313
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:51	210505−10	2114313
7440−66−6	Zinc	6.57	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 19:51	210505−10	2114313

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114313	2114311	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.37	ug/L	0.36	ug/L	101.6	90.0 − 110.0	MS	04−MAY−21 17:59	210504−1
	Uranium−238	50.5	ug/L	49.64	ug/L	101.7	90.0 − 110.0	MS	04−MAY−21 17:59	210504−1
	Aluminum	5120	ug/L	5050	ug/L	101.4	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Antimony	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Arsenic	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Barium	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Beryllium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Cadmium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Calcium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Chromium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Cobalt	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Copper	52.9	ug/L	50	ug/L	105.8	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Lead	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Magnesium	5100	ug/L	5000	ug/L	102	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Manganese	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Molybdenum	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Nickel	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Potassium	5170	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Selenium	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Silver	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Sodium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Thallium	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Thorium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Vanadium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Zinc	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	04−MAY−21 23:20	210504−3
	Uranium−235	0.36	ug/L	0.36	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 07:33	210504−5
	Uranium−238	48.8	ug/L	49.64	ug/L	98.4	90.0 − 110.0	MS	05−MAY−21 07:33	210504−5
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	05−MAY−21 12:21	210505−6
	Aluminum	4920	ug/L	5050	ug/L	97.4	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Antimony	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Arsenic	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Barium	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Beryllium	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Cadmium	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Calcium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Chromium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Cobalt	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Copper	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Lead	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Magnesium	4880	ug/L	5000	ug/L	97.7	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Manganese	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Molybdenum	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Nickel	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Potassium	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Selenium	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Silver	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Sodium	5180	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Thorium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Vanadium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Zinc	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	05−MAY−21 18:14	210505−10
	Uranium−235	0.36	ug/L	0.36	ug/L	101.2	90.0 − 110.0	MS	06−MAY−21 10:52	210506−11
	Uranium−238	49.3	ug/L	49.64	ug/L	99.3	90.0 − 110.0	MS	06−MAY−21 10:52	210506−11
	Calcium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	MS	06−MAY−21 13:57	210506−13
	Magnesium	5330	ug/L	5000	ug/L	106.5	90.0 − 110.0	MS	06−MAY−21 13:57	210506−13
	Manganese	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	06−MAY−21 13:57	210506−13
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	06−MAY−21 19:32	210506−16
CCV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.4	90.0 − 110.0	MS	04−MAY−21 18:08	210504−1
	Uranium−238	50.2	ug/L	49.64	ug/L	101.1	90.0 − 110.0	MS	04−MAY−21 18:08	210504−1
	Aluminum	5050	ug/L	5050	ug/L	99.9	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Antimony	52.3	ug/L	50	ug/L	104.7	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Arsenic	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Barium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Beryllium	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Cadmium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Calcium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Chromium	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Cobalt	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Copper	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Iron	5140	ug/L	5000	ug/L	102.8	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Lead	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Manganese	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Molybdenum	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Nickel	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Potassium	5220	ug/L	5000	ug/L	104.4	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Selenium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Silver	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Sodium	5170	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Thallium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Thorium	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Vanadium	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Zinc	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	04−MAY−21 23:38	210504−3
	Uranium−235	0.37	ug/L	0.36	ug/L	103.1	90.0 − 110.0	MS	05−MAY−21 07:42	210504−5
	Uranium−238	50	ug/L	49.64	ug/L	100.7	90.0 − 110.0	MS	05−MAY−21 07:42	210504−5
	Calcium	4900	ug/L	5000	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 12:30	210505−6
	Aluminum	4940	ug/L	5050	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Antimony	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Arsenic	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Barium	48.3	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Beryllium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cadmium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Calcium	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Chromium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Cobalt	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Copper	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Lead	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Magnesium	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Manganese	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Molybdenum	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Nickel	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Potassium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Selenium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Silver	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Sodium	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Thallium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Thorium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Vanadium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Zinc	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	05−MAY−21 18:32	210505−10
	Uranium−235	0.36	ug/L	0.36	ug/L	99.7	90.0 − 110.0	MS	06−MAY−21 11:01	210506−11
	Uranium−238	48.2	ug/L	49.64	ug/L	97	90.0 − 110.0	MS	06−MAY−21 11:01	210506−11
	Calcium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	06−MAY−21 14:15	210506−13
	Magnesium	5300	ug/L	5000	ug/L	105.9	90.0 − 110.0	MS	06−MAY−21 14:15	210506−13
	Manganese	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	06−MAY−21 14:15	210506−13
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	06−MAY−21 19:41	210506−16
CCV02										
	Uranium−235	0.36	ug/L	0.36	ug/L	101	90.0 − 110.0	MS	04−MAY−21 18:28	210504−1
	Uranium−238	50.4	ug/L	49.64	ug/L	101.5	90.0 − 110.0	MS	04−MAY−21 18:28	210504−1
	Aluminum	4900	ug/L	5050	ug/L	97.1	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Antimony	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Arsenic	48.2	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Barium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Beryllium	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Cadmium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Calcium	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Chromium	48.6	ug/L	50	ug/L	97.2	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Cobalt	48.3	ug/L	50	ug/L	96.7	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Copper	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Iron	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Lead	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Magnesium	4860	ug/L	5000	ug/L	97.2	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Manganese	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Molybdenum	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Nickel	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Potassium	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Selenium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Silver	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Sodium	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Thallium	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Thorium	52.4	ug/L	50	ug/L	104.8	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Vanadium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Zinc	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	04−MAY−21 23:49	210504−3
	Uranium−235	0.36	ug/L	0.36	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 07:51	210504−5
	Uranium−238	49.1	ug/L	49.64	ug/L	99	90.0 − 110.0	MS	05−MAY−21 07:51	210504−5
	Calcium	4810	ug/L	5000	ug/L	96.2	90.0 − 110.0	MS	05−MAY−21 12:36	210505−6
	Aluminum	4920	ug/L	5050	ug/L	97.4	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Antimony	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Arsenic	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Barium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Beryllium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Cadmium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Calcium	4850	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Chromium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10

METALS
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Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cobalt	48.7	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Copper	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Lead	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Magnesium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Manganese	48.2	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Molybdenum	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Nickel	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Potassium	4870	ug/L	5000	ug/L	97.5	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Selenium	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Silver	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Sodium	5150	ug/L	5000	ug/L	103	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Thallium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Thorium	54.3	ug/L	50	ug/L	108.5	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Vanadium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Zinc	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	05−MAY−21 18:43	210505−10
	Uranium−235	0.35	ug/L	0.36	ug/L	97.9	90.0 − 110.0	MS	06−MAY−21 11:17	210506−11
	Uranium−238	48.9	ug/L	49.64	ug/L	98.6	90.0 − 110.0	MS	06−MAY−21 11:17	210506−11
	Calcium	5020	ug/L	5000	ug/L	100.5	90.0 − 110.0	MS	06−MAY−21 14:26	210506−13
	Magnesium	5240	ug/L	5000	ug/L	104.8	90.0 − 110.0	MS	06−MAY−21 14:26	210506−13
	Manganese	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	06−MAY−21 14:26	210506−13
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	06−MAY−21 19:47	210506−16
CCV03										
	Uranium−235	0.36	ug/L	0.36	ug/L	100	90.0 − 110.0	MS	04−MAY−21 18:44	210504−1
	Uranium−238	50.3	ug/L	49.64	ug/L	101.4	90.0 − 110.0	MS	04−MAY−21 18:44	210504−1
	Aluminum	4940	ug/L	5050	ug/L	97.8	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Antimony	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Arsenic	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Barium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Beryllium	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Cadmium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Calcium	4830	ug/L	5000	ug/L	96.6	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Chromium	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Cobalt	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Copper	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Iron	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Lead	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Magnesium	4960	ug/L	5000	ug/L	99.3	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Manganese	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Molybdenum	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Nickel	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Potassium	5000	ug/L	5000	ug/L	100.1	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Selenium	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Silver	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Sodium	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Thallium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Thorium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Vanadium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Zinc	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	05−MAY−21 01:02	210504−3
	Calcium	4900	ug/L	5000	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 12:53	210505−6
	Aluminum	4760	ug/L	5050	ug/L	94.3	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Antimony	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Arsenic	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Barium	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Beryllium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Cadmium	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Calcium	4740	ug/L	5000	ug/L	94.8	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Chromium	47.3	ug/L	50	ug/L	94.5	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Cobalt	47.4	ug/L	50	ug/L	94.8	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Copper	47.8	ug/L	50	ug/L	95.6	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Lead	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Magnesium	4720	ug/L	5000	ug/L	94.5	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Manganese	47.6	ug/L	50	ug/L	95.1	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10

METALS
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Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Molybdenum	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Nickel	47.7	ug/L	50	ug/L	95.3	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Potassium	4780	ug/L	5000	ug/L	95.6	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Selenium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Silver	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Sodium	4950	ug/L	5000	ug/L	98.9	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Thallium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Thorium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Vanadium	47.4	ug/L	50	ug/L	94.8	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Zinc	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	05−MAY−21 19:15	210505−10
	Uranium−235	0.36	ug/L	0.36	ug/L	99.5	90.0 − 110.0	MS	06−MAY−21 11:39	210506−11
	Uranium−238	49.2	ug/L	49.64	ug/L	99.1	90.0 − 110.0	MS	06−MAY−21 11:39	210506−11
	Calcium	4970	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	06−MAY−21 15:38	210506−13
	Magnesium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	06−MAY−21 15:38	210506−13
	Manganese	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	06−MAY−21 15:38	210506−13
	Iron	4900	ug/L	5000	ug/L	98.1	90.0 − 110.0	MS	06−MAY−21 20:28	210506−16
CCV04										
	Aluminum	5010	ug/L	5050	ug/L	99.2	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Antimony	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Arsenic	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Barium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Beryllium	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Cadmium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Calcium	4910	ug/L	5000	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Chromium	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Cobalt	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Copper	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Iron	4930	ug/L	5000	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Lead	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Magnesium	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Manganese	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Molybdenum	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Nickel	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Potassium	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Selenium	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Silver	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Sodium	5010	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Thallium	48.3	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Thorium	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Vanadium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Zinc	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	05−MAY−21 01:41	210504−3
	Aluminum	4870	ug/L	5050	ug/L	96.5	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Antimony	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Arsenic	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Barium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Beryllium	47.5	ug/L	50	ug/L	95	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Cadmium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Calcium	4840	ug/L	5000	ug/L	96.7	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Chromium	47.7	ug/L	50	ug/L	95.3	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Cobalt	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Copper	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Lead	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Magnesium	4790	ug/L	5000	ug/L	95.8	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Manganese	48.1	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Molybdenum	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Nickel	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Potassium	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Selenium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Silver	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Sodium	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Thorium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Vanadium	47.5	ug/L	50	ug/L	95	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Zinc	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	05−MAY−21 19:55	210505−10
	Calcium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	06−MAY−21 16:30	210506−13
	Magnesium	5170	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	06−MAY−21 16:30	210506−13
	Manganese	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	06−MAY−21 16:30	210506−13
	Iron	4950	ug/L	5000	ug/L	99.1	90.0 − 110.0	MS	06−MAY−21 20:45	210506−16
CCV05										
	Aluminum	4910	ug/L	5050	ug/L	97.2	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Antimony	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Arsenic	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Barium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Beryllium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Cadmium	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Calcium	4860	ug/L	5000	ug/L	97.1	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Chromium	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Cobalt	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Copper	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Iron	4840	ug/L	5000	ug/L	96.8	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Lead	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Magnesium	4850	ug/L	5000	ug/L	97.1	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Manganese	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Molybdenum	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Nickel	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Potassium	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Selenium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Silver	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Sodium	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Thallium	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Thorium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Vanadium	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3
	Zinc	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	05−MAY−21 02:14	210504−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Iron	4890	ug/L	5000	ug/L	97.8	90.0 − 110.0	MS	06−MAY−21 21:05	210506−16

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0016	ug/L	.0014	ug/L	114.3	80.0 − 120.0	MS	04−MAY−21 18:03	210504−1
	Uranium−238	.208	ug/L	.2	ug/L	104.1	80.0 − 120.0	MS	04−MAY−21 18:03	210504−1
	Aluminum	52.4	ug/L	50	ug/L	104.8	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Antimony	2.96	ug/L	3	ug/L	98.8	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Arsenic	4.79	ug/L	5	ug/L	95.8	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Barium	3.96	ug/L	4	ug/L	98.9	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Beryllium	.493	ug/L	.5	ug/L	98.6	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Cadmium	1.05	ug/L	1	ug/L	104.5	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Calcium	233	ug/L	200	ug/L	116.6	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Chromium	9.89	ug/L	10	ug/L	98.9	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Cobalt	1.03	ug/L	1	ug/L	103.3	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Copper	2.21	ug/L	2	ug/L	110.5	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Iron	104	ug/L	100	ug/L	103.5	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Lead	2.06	ug/L	2	ug/L	103.1	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Magnesium	30.4	ug/L	30	ug/L	101.2	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Manganese	5.05	ug/L	5	ug/L	101	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Molybdenum	1.02	ug/L	1	ug/L	101.7	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Nickel	2.12	ug/L	2	ug/L	106	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Potassium	310	ug/L	300	ug/L	103.4	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Selenium	4.86	ug/L	5	ug/L	97.2	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Silver	1	ug/L	1	ug/L	100.1	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Sodium	266	ug/L	250	ug/L	106.2	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Thallium	1.98	ug/L	2	ug/L	98.9	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Thorium	2.06	ug/L	2	ug/L	102.9	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Vanadium	19.8	ug/L	20	ug/L	98.9	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Zinc	20	ug/L	20	ug/L	100.2	80.0 − 120.0	MS	04−MAY−21 23:28	210504−3
	Uranium−235	.0016	ug/L	.0014	ug/L	114.3	80.0 − 120.0	MS	05−MAY−21 07:37	210504−5
	Uranium−238	.211	ug/L	.2	ug/L	105.4	80.0 − 120.0	MS	05−MAY−21 07:37	210504−5
	Calcium	228	ug/L	200	ug/L	114.2	80.0 − 120.0	MS	05−MAY−21 12:25	210505−6
	Aluminum	46.4	ug/L	50	ug/L	92.7	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Antimony	2.79	ug/L	3	ug/L	93	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Arsenic	4.57	ug/L	5	ug/L	91.4	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
	Barium	3.78	ug/L	4	ug/L	94.4	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Beryllium	.501	ug/L	.5	ug/L	100.2	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Cadmium	.973	ug/L	1	ug/L	97.3	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Calcium	217	ug/L	200	ug/L	108.7	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Chromium	9.54	ug/L	10	ug/L	95.4	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Cobalt	.969	ug/L	1	ug/L	96.9	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Copper	1.95	ug/L	2	ug/L	97.3	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Lead	2.01	ug/L	2	ug/L	100.5	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Magnesium	28.1	ug/L	30	ug/L	93.8	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Manganese	4.68	ug/L	5	ug/L	93.5	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Molybdenum	1	ug/L	1	ug/L	100.4	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Nickel	1.89	ug/L	2	ug/L	94.3	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Potassium	282	ug/L	300	ug/L	93.9	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Selenium	4.86	ug/L	5	ug/L	97.2	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Silver	1.01	ug/L	1	ug/L	100.9	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Sodium	247	ug/L	250	ug/L	98.8	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Thallium	1.86	ug/L	2	ug/L	93	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Thorium	2.11	ug/L	2	ug/L	105.7	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Vanadium	19	ug/L	20	ug/L	94.9	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Zinc	19.9	ug/L	20	ug/L	99.5	80.0 − 120.0	MS	05−MAY−21 18:21	210505−10
	Uranium−235	.0015	ug/L	.0014	ug/L	107.1	80.0 − 120.0	MS	06−MAY−21 10:56	210506−11
	Uranium−238	.2	ug/L	.2	ug/L	99.9	80.0 − 120.0	MS	06−MAY−21 10:56	210506−11
	Calcium	236	ug/L	200	ug/L	118.2	80.0 − 120.0	MS	06−MAY−21 14:04	210506−13
	Magnesium	31.3	ug/L	30	ug/L	104.5	80.0 − 120.0	MS	06−MAY−21 14:04	210506−13
	Manganese	4.91	ug/L	5	ug/L	98.3	80.0 − 120.0	MS	06−MAY−21 14:04	210506−13
	Iron	101	ug/L	100	ug/L	101	80.0 − 120.0	MS	06−MAY−21 19:36	210506−16

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	04−MAY−21 18:01	210504−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	04−MAY−21 18:01	210504−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	04−MAY−21 23:24	210504−3
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	04−MAY−21 23:24	210504−3
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	04−MAY−21 23:24	210504−3
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	04−MAY−21 23:24	210504−3
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	04−MAY−21 23:24	210504−3
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	04−MAY−21 23:24	210504−3
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	05−MAY−21 07:35	210504−5
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	05−MAY−21 07:35	210504−5
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	05−MAY−21 12:23	210505−6
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	05−MAY−21 18:18	210505−10

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	05−MAY−21 18:18	210505−10
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	05−MAY−21 18:18	210505−10
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	05−MAY−21 18:18	210505−10
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	05−MAY−21 18:18	210505−10
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	05−MAY−21 18:18	210505−10
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	06−MAY−21 10:54	210506−11
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	06−MAY−21 10:54	210506−11
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	06−MAY−21 14:01	210506−13
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	06−MAY−21 14:01	210506−13
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	06−MAY−21 14:01	210506−13
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	06−MAY−21 19:34	210506−16
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	04−MAY−21 18:10	210504−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	04−MAY−21 18:10	210504−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	04−MAY−21 23:42	210504−3

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	04−MAY−21 23:42	210504−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	04−MAY−21 23:42	210504−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	04−MAY−21 23:42	210504−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Molybdenum	0.682	+/−1	J	0.2	1.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	04−MAY−21 23:42	210504−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	04−MAY−21 23:42	210504−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 23:42	210504−3
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	05−MAY−21 07:44	210504−5
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	05−MAY−21 07:44	210504−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 12:32	210505−6
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 18:36	210505−10

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 18:36	210505−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Molybdenum	0.717	+/−1	J	0.2	1.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 18:36	210505−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 18:36	210505−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 18:36	210505−10
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	06−MAY−21 11:03	210506−11
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	06−MAY−21 11:03	210506−11
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	06−MAY−21 14:19	210506−13
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	06−MAY−21 14:19	210506−13
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	06−MAY−21 14:19	210506−13
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	06−MAY−21 19:43	210506−16
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	04−MAY−21 18:30	210504−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	04−MAY−21 18:30	210504−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	04−MAY−21 23:53	210504−3

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	04−MAY−21 23:53	210504−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	04−MAY−21 23:53	210504−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	04−MAY−21 23:53	210504−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Molybdenum	0.56	+/−1	J	0.2	1.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	04−MAY−21 23:53	210504−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	04−MAY−21 23:53	210504−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Thorium	0.75	+/−2	J	0.7	2.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	04−MAY−21 23:53	210504−3
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	05−MAY−21 07:53	210504−5
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	05−MAY−21 07:53	210504−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 12:38	210505−6
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 18:46	210505−10
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 18:46	210505−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 18:46	210505−10

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Molybdenum	0.545	+/−1	J	0.2	1.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 18:46	210505−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 18:46	210505−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Thorium	0.708	+/−2	J	0.7	2.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 18:46	210505−10
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	06−MAY−21 11:19	210506−11
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	06−MAY−21 11:19	210506−11
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	06−MAY−21 14:30	210506−13
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	06−MAY−21 14:30	210506−13
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	06−MAY−21 14:30	210506−13
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	06−MAY−21 19:49	210506−16
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	04−MAY−21 18:46	210504−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	04−MAY−21 18:46	210504−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 01:05	210504−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 01:05	210504−3

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	05−MAY−21 01:05	210504−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 01:05	210504−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 01:05	210504−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 01:05	210504−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 12:54	210505−6
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 19:19	210505−10
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 19:19	210505−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 19:19	210505−10

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 19:19	210505−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 19:19	210505−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 19:19	210505−10
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	06−MAY−21 11:41	210506−11
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	06−MAY−21 11:41	210506−11
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	06−MAY−21 15:42	210506−13
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	06−MAY−21 15:42	210506−13
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	06−MAY−21 15:42	210506−13
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	06−MAY−21 20:30	210506−16
CCB04										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 01:45	210504−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 01:45	210504−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	05−MAY−21 01:45	210504−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 01:45	210504−3

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 01:45	210504−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 01:45	210504−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 01:45	210504−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 19:59	210505−10
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 19:59	210505−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 19:59	210505−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 19:59	210505−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 19:59	210505−10

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 19:59	210505−10
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	06−MAY−21 16:33	210506−13
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	06−MAY−21 16:33	210506−13
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	06−MAY−21 16:33	210506−13
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	06−MAY−21 20:47	210506−16
CCB05										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 02:18	210504−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 02:18	210504−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	05−MAY−21 02:18	210504−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 02:18	210504−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 02:18	210504−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 02:18	210504−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 02:18	210504−3

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540450

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	06−MAY−21 21:07	210506−16

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 540450
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204793758								
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
1204793768								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 540450

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.345	ug/L	+/−0.5	BJ	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.818	ug/L	+/−1	BJ	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0002	ug/L					04−MAY−21 18:05	210504−1
	Uranium−238	0.024	ug/L					04−MAY−21 18:05	210504−1
ICSAB01									
	Uranium−235	0.135	ug/L	.145	ug/L	92.8	80.0 − 120.0	04−MAY−21 18:06	210504−1
	Uranium−238	19.1	ug/L	19.86	ug/L	96.3	80.0 − 120.0	04−MAY−21 18:06	210504−1

METALS
−4−
Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	86300	ug/L	100000	ug/L	86.3	80.0 − 120.0	05−MAY−21 18:25	210505−10
	Antimony	0.052	ug/L					05−MAY−21 18:25	210505−10
	Arsenic	0.129	ug/L					05−MAY−21 18:25	210505−10
	Barium	2.45	ug/L					05−MAY−21 18:25	210505−10
	Beryllium	0.017	ug/L					05−MAY−21 18:25	210505−10
	Cadmium	0.961	ug/L					05−MAY−21 18:25	210505−10
	Calcium	92800	ug/L	100000	ug/L	92.8	80.0 − 120.0	05−MAY−21 18:25	210505−10
	Chromium	0.793	ug/L					05−MAY−21 18:25	210505−10
	Cobalt	0.469	ug/L					05−MAY−21 18:25	210505−10
	Copper	0.193	ug/L					05−MAY−21 18:25	210505−10
	Lead	0.228	ug/L					05−MAY−21 18:25	210505−10
	Magnesium	84200	ug/L	100000	ug/L	84.2	80.0 − 120.0	05−MAY−21 18:25	210505−10
	Manganese	5.64	ug/L					05−MAY−21 18:25	210505−10
	Molybdenum	1950	ug/L	2000	ug/L	97.4	80.0 − 120.0	05−MAY−21 18:25	210505−10
	Nickel	0.393	ug/L					05−MAY−21 18:25	210505−10
	Potassium	87700	ug/L	100000	ug/L	87.7	80.0 − 120.0	05−MAY−21 18:25	210505−10
	Selenium	0.073	ug/L					05−MAY−21 18:25	210505−10
	Silver	0.143	ug/L					05−MAY−21 18:25	210505−10
	Sodium	94300	ug/L	100000	ug/L	94.3	80.0 − 120.0	05−MAY−21 18:25	210505−10
	Thallium	0.043	ug/L					05−MAY−21 18:25	210505−10
	Thorium	1.55	ug/L					05−MAY−21 18:25	210505−10
	Vanadium	0.009	ug/L					05−MAY−21 18:25	210505−10
	Zinc	3.72	ug/L					05−MAY−21 18:25	210505−10
ICSAB01									
	Aluminum	88000	ug/L	100000	ug/L	88	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Antimony	19.7	ug/L	20	ug/L	98.3	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Arsenic	20.2	ug/L	20	ug/L	101	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Barium	20.8	ug/L	22.35	ug/L	93.1	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Beryllium	18.0	ug/L	20	ug/L	90.1	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Cadmium	19.9	ug/L	20.72	ug/L	96	80.0 − 120.0	05−MAY−21 18:28	210505−10

METALS
−4−
Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Calcium	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Chromium	19.5	ug/L	20	ug/L	97.2	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Cobalt	18.5	ug/L	20.65	ug/L	89.7	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Copper	17.0	ug/L	20	ug/L	84.9	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Lead	18.8	ug/L	20	ug/L	93.8	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Magnesium	85700	ug/L	100000	ug/L	85.7	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Manganese	24.2	ug/L	25.72	ug/L	93.9	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Molybdenum	1970	ug/L	2000	ug/L	98.6	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Nickel	17.7	ug/L	20	ug/L	88.5	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Potassium	89200	ug/L	100000	ug/L	89.2	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Selenium	21.4	ug/L	20	ug/L	107	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Silver	18.6	ug/L	20	ug/L	93.1	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Sodium	95800	ug/L	100000	ug/L	95.8	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Thallium	18.3	ug/L	20	ug/L	91.5	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Thorium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Vanadium	19.0	ug/L	20	ug/L	94.9	80.0 − 120.0	05−MAY−21 18:28	210505−10
	Zinc	21.7	ug/L	20	ug/L	109	80.0 − 120.0	05−MAY−21 18:28	210505−10

METALS
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Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					06−MAY−21 10:58	210506−11
	Uranium−238	0.022	ug/L					06−MAY−21 10:58	210506−11
ICSAB01									
	Uranium−235	0.139	ug/L	.145	ug/L	95.7	80.0 − 120.0	06−MAY−21 10:59	210506−11
	Uranium−238	19.0	ug/L	19.86	ug/L	95.6	80.0 − 120.0	06−MAY−21 10:59	210506−11

METALS
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Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	93400	ug/L	100000	ug/L	93.4	80.0 − 120.0	06−MAY−21 14:08	210506−13
	Magnesium	92100	ug/L	100000	ug/L	92.1	80.0 − 120.0	06−MAY−21 14:08	210506−13
	Manganese	6.03	ug/L					06−MAY−21 14:08	210506−13
ICSAB01									
	Calcium	93600	ug/L	100000	ug/L	93.6	80.0 − 120.0	06−MAY−21 14:11	210506−13
	Magnesium	93700	ug/L	100000	ug/L	93.8	80.0 − 120.0	06−MAY−21 14:11	210506−13
	Manganese	25.3	ug/L	25.72	ug/L	98.3	80.0 − 120.0	06−MAY−21 14:11	210506−13

METALS
−4−
Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Iron	81300	ug/L	100000	ug/L	81.3	80.0 − 120.0	06−MAY−21 19:38	210506−16
ICSAB01									
	Iron	81300	ug/L	100000	ug/L	81.3	80.0 − 120.0	06−MAY−21 19:40	210506−16

METALS
−4−
Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	92500	ug/L	100000	ug/L	92.5	80.0 − 120.0	04−MAY−21 23:31	210504−3
	Antimony	0.115	ug/L					04−MAY−21 23:31	210504−3
	Arsenic	0.098	ug/L					04−MAY−21 23:31	210504−3
	Barium	2.51	ug/L					04−MAY−21 23:31	210504−3
	Beryllium	0.011	ug/L					04−MAY−21 23:31	210504−3
	Cadmium	1.03	ug/L					04−MAY−21 23:31	210504−3
	Calcium	94200	ug/L	100000	ug/L	94.2	80.0 − 120.0	04−MAY−21 23:31	210504−3
	Chromium	0.852	ug/L					04−MAY−21 23:31	210504−3
	Cobalt	0.48	ug/L					04−MAY−21 23:31	210504−3
	Copper	0.187	ug/L					04−MAY−21 23:31	210504−3
	Iron	82100	ug/L	100000	ug/L	82.1	80.0 − 120.0	04−MAY−21 23:31	210504−3
	Lead	0.208	ug/L					04−MAY−21 23:31	210504−3
	Magnesium	90100	ug/L	100000	ug/L	90.1	80.0 − 120.0	04−MAY−21 23:31	210504−3
	Manganese	6.86	ug/L					04−MAY−21 23:31	210504−3
	Molybdenum	2050	ug/L	2000	ug/L	102	80.0 − 120.0	04−MAY−21 23:31	210504−3
	Nickel	0.429	ug/L					04−MAY−21 23:31	210504−3
	Potassium	94700	ug/L	100000	ug/L	94.7	80.0 − 120.0	04−MAY−21 23:31	210504−3
	Selenium	0.259	ug/L					04−MAY−21 23:31	210504−3
	Silver	0.138	ug/L					04−MAY−21 23:31	210504−3
	Sodium	98300	ug/L	100000	ug/L	98.3	80.0 − 120.0	04−MAY−21 23:31	210504−3
	Thallium	0.076	ug/L					04−MAY−21 23:31	210504−3
	Thorium	2.0	ug/L					04−MAY−21 23:31	210504−3
	Vanadium	0.026	ug/L					04−MAY−21 23:31	210504−3
	Zinc	2.54	ug/L					04−MAY−21 23:31	210504−3
ICSAB01									
	Aluminum	93700	ug/L	100000	ug/L	93.7	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Antimony	21.0	ug/L	20	ug/L	105	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Arsenic	20.5	ug/L	20	ug/L	102	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Barium	21.8	ug/L	22.35	ug/L	97.4	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Beryllium	18.3	ug/L	20	ug/L	91.5	80.0 − 120.0	04−MAY−21 23:35	210504−3

METALS
−4−
Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cadmium	20.1	ug/L	20.72	ug/L	97	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Calcium	95100	ug/L	100000	ug/L	95.1	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Chromium	20.4	ug/L	20	ug/L	102	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Cobalt	19.5	ug/L	20.65	ug/L	94.6	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Copper	17.9	ug/L	20	ug/L	89.4	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Iron	84000	ug/L	100000	ug/L	84	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Lead	18.8	ug/L	20	ug/L	93.9	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Magnesium	91100	ug/L	100000	ug/L	91.1	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Manganese	26.6	ug/L	25.72	ug/L	104	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Molybdenum	2060	ug/L	2000	ug/L	103	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Nickel	18.8	ug/L	20	ug/L	93.7	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Potassium	97000	ug/L	100000	ug/L	97	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Selenium	19.7	ug/L	20	ug/L	98.3	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Silver	18.6	ug/L	20	ug/L	93.1	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Sodium	99500	ug/L	100000	ug/L	99.5	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Thallium	18.3	ug/L	20	ug/L	91.3	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Thorium	20.8	ug/L	20	ug/L	104	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Vanadium	20.1	ug/L	20	ug/L	101	80.0 − 120.0	04−MAY−21 23:35	210504−3
	Zinc	20.9	ug/L	20	ug/L	105	80.0 − 120.0	04−MAY−21 23:35	210504−3

METALS
−4−
Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0003	ug/L					05−MAY−21 07:39	210504−5
	Uranium−238	0.039	ug/L					05−MAY−21 07:39	210504−5
ICSAB01									
	Uranium−235	0.137	ug/L	.145	ug/L	94.5	80.0 − 120.0	05−MAY−21 07:40	210504−5
	Uranium−238	18.9	ug/L	19.86	ug/L	95.3	80.0 − 120.0	05−MAY−21 07:40	210504−5

METALS
−4−
Interference Check Sample

SDG No: 540450

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	92000	ug/L	100000	ug/L	92	80.0 − 120.0	05−MAY−21 12:26	210505−6
ICSAB01									
	Calcium	92100	ug/L	100000	ug/L	92.1	80.0 − 120.0	05−MAY−21 12:28	210505−6

METALS
−5a−

Matrix Spike Summary

SDG NO. 540450 **Client ID** MW−S64−04082021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540450003 **Spike ID:** 1204793760

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Calcium	ug/L	75−125	9780		7720		2000	103		MS
Chromium	ug/L	75−125	48.5		3.00	U	50.0	94.8		MS
Cobalt	ug/L	75−125	48.1		0.847	J	50.0	94.4		MS
Copper	ug/L	75−125	129		84.0		50.0	90.9		MS
Iron	ug/L	75−125	2140		222		2000	96		MS
Lead	ug/L	75−125	50.3		0.500	U	50.0	100		MS
Magnesium	ug/L	75−125	3740		1730		2000	100		MS
Manganese	ug/L	75−125	60.5		13.8		50.0	93.4		MS
Molybdenum	ug/L	75−125	53.1		1.53		50.0	103		MS
Nickel	ug/L	75−125	49.8		2.56		50.0	94.5		MS
Potassium	ug/L	75−125	3720		1700		2000	101		MS
Selenium	ug/L	75−125	48.4		2.00	U	50.0	96.1		MS
Silver	ug/L	75−125	51.1		0.300	U	50.0	102		MS
Sodium	ug/L		11800		9780		2000	101	N/A	MS
Thallium	ug/L	75−125	49.0		0.600	U	50.0	98		MS
Thorium	ug/L	75−125	49.1		0.700	U	50.0	97.8		MS
Uranium−235	ug/L	75−125	0.400		0.0349	J	0.360	101		MS
Uranium−238	ug/L	75−125	67.5		16.0		49.6	104		MS
Vanadium	ug/L	75−125	49.0		3.30	U	50.0	94.8		MS
Zinc	ug/L	75−125	51.4		5.02	J	50.0	92.7		MS
Cadmium	ug/L	75−125	49.9		0.300	U	50.0	99.7		MS
Aluminum	ug/L	75−125	2200		195		2000	100		MS

SW846

METALS
−5a−

Matrix Spike Summary

SDG NO. 540450 **Client ID** MW−S64−04082021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540450003 **Spike ID:** 1204793760

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Antimony	ug/L	75−125	51.6		1.00	U	50.0	103		MS
Arsenic	ug/L	75−125	47.5		2.00	U	50.0	94		MS
Barium	ug/L	75−125	57.3		7.60		50.0	99.4		MS
Beryllium	ug/L	75−125	52.7		0.200	U	50.0	105		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 540450 **Client ID** MW−S64−04082021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540450003 **Spike ID:** 1204793761

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2230		195		2000	102		MS
Antimony	ug/L	75−125	51.4		1.00	U	50.0	103		MS
Arsenic	ug/L	75−125	47.0		2.00	U	50.0	93		MS
Barium	ug/L	75−125	56.3		7.60		50.0	97.4		MS
Beryllium	ug/L	75−125	53.7		0.200	U	50.0	107		MS
Cadmium	ug/L	75−125	50.5		0.300	U	50.0	101		MS
Calcium	ug/L	75−125	9470		7720		2000	87.4		MS
Chromium	ug/L	75−125	47.9		3.00	U	50.0	93.5		MS
Cobalt	ug/L	75−125	47.6		0.847	J	50.0	93.4		MS
Copper	ug/L	75−125	127		84.0		50.0	85.4		MS
Iron	ug/L	75−125	2130		222		2000	95.6		MS
Lead	ug/L	75−125	49.4		0.500	U	50.0	98.6		MS
Magnesium	ug/L	75−125	3720		1730		2000	99.7		MS
Manganese	ug/L	75−125	59.7		13.8		50.0	91.8		MS
Molybdenum	ug/L	75−125	53.2		1.53		50.0	103		MS
Nickel	ug/L	75−125	48.9		2.56		50.0	92.6		MS
Potassium	ug/L	75−125	3640		1700		2000	96.9		MS
Selenium	ug/L	75−125	47.6		2.00	U	50.0	94.5		MS
Silver	ug/L	75−125	51.6		0.300	U	50.0	103		MS
Sodium	ug/L		11500		9780		2000	88.4	N/A	MS
Thallium	ug/L	75−125	48.2		0.600	U	50.0	96.3		MS
Thorium	ug/L	75−125	48.7		0.700	U	50.0	97		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 540450 **Client ID:** MW−S64−04082021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540450003 **Spike ID:** 1204793761

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.403		0.0349	J	0.360	102		MS
Uranium−238	ug/L	75−125	66.9		16.0		49.6	102		MS
Vanadium	ug/L	75−125	48.3		3.30	U	50.0	93.3		MS
Zinc	ug/L	75−125	51.5		5.02	J	50.0	92.9		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Summary

SDG NO. 540450 **Client ID** MW−S64−04082021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540450004 **Spike ID:** 1204793770

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2020		19.3	U	2000	99.9		MS
Antimony	ug/L	75−125	50.4		1.00	U	50.0	101		MS
Arsenic	ug/L	75−125	46.9		2.00	U	50.0	93		MS
Barium	ug/L	75−125	56.2		6.42		50.0	99.5		MS
Beryllium	ug/L	75−125	54.2		0.200	U	50.0	108		MS
Cadmium	ug/L	75−125	50.3		0.300	U	50.0	101		MS
Calcium	ug/L	75−125	9500		7290		2000	110		MS
Chromium	ug/L	75−125	50.3		3.00	U	50.0	99.2		MS
Cobalt	ug/L	75−125	49.4		0.764	J	50.0	97.3		MS
Copper	ug/L	75−125	117		68.5		50.0	98		MS
Iron	ug/L	75−125	2160		33.0	U	2000	106		MS
Lead	ug/L	75−125	50.5		0.500	U	50.0	101		MS
Magnesium	ug/L	75−125	3640		1560		2000	104		MS
Manganese	ug/L	75−125	64.0		14.4		50.0	99.1		MS
Molybdenum	ug/L	75−125	53.8		1.78		50.0	104		MS
Nickel	ug/L	75−125	50.8		2.40		50.0	96.8		MS
Potassium	ug/L	75−125	3690		1610		2000	104		MS
Selenium	ug/L	75−125	49.2		2.00	U	50.0	98.2		MS
Silver	ug/L	75−125	52.5		0.300	U	50.0	105		MS
Sodium	ug/L		12000		9600		2000	120	N/A	MS
Thallium	ug/L	75−125	49.0		0.600	U	50.0	97.9		MS
Thorium	ug/L	75−125	49.2		0.700	U	50.0	97.5		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 540450 **Client ID** MW−S64−04082021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540450004 **Spike ID:** 1204793770

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.403		0.0249	J	0.360	105		MS
Uranium−238	ug/L	75−125	63.9		11.3		49.6	106		MS
Vanadium	ug/L	75−125	50.1		3.30	U	50.0	97.8		MS
Zinc	ug/L	75−125	52.2		8.75	J	50.0	86.9		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 540450 **Client ID** MW−S64−04082021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540450004 **Spike ID:** 1204793771

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Barium	ug/L	75−125	54.9		6.42		50.0	96.9		MS
Beryllium	ug/L	75−125	53.8		0.200	U	50.0	107		MS
Cadmium	ug/L	75−125	49.4		0.300	U	50.0	98.8		MS
Calcium	ug/L	75−125	9200		7290		2000	95.2		MS
Chromium	ug/L	75−125	48.5		3.00	U	50.0	95.7		MS
Cobalt	ug/L	75−125	48.4		0.764	J	50.0	95.2		MS
Copper	ug/L	75−125	114		68.5		50.0	90.5		MS
Iron	ug/L	75−125	2040		33.0	U	2000	101		MS
Lead	ug/L	75−125	50.4		0.500	U	50.0	101		MS
Magnesium	ug/L	75−125	3540		1560		2000	99		MS
Manganese	ug/L	75−125	61.7		14.4		50.0	94.5		MS
Molybdenum	ug/L	75−125	51.6		1.78		50.0	99.7		MS
Nickel	ug/L	75−125	49.5		2.40		50.0	94.2		MS
Potassium	ug/L	75−125	3580		1610		2000	98.9		MS
Selenium	ug/L	75−125	48.0		2.00	U	50.0	95.7		MS
Silver	ug/L	75−125	51.2		0.300	U	50.0	102		MS
Sodium	ug/L		11600		9600		2000	102	N/A	MS
Thallium	ug/L	75−125	49.0		0.600	U	50.0	97.9		MS
Thorium	ug/L	75−125	49.5		0.700	U	50.0	98.2		MS
Uranium−235	ug/L	75−125	0.397		0.0249	J	0.360	103		MS
Uranium−238	ug/L	75−125	62.6		11.3		49.6	103		MS
Vanadium	ug/L	75−125	49.2		3.30	U	50.0	96		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 540450 **Client ID** MW−S64−04082021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540450004 **Spike ID:** 1204793771

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Zinc	ug/L	75−125	50.1		8.75	J	50.0	82.7		MS
Arsenic	ug/L	75−125	46.6		2.00	U	50.0	92.4		MS
Aluminum	ug/L	75−125	1990		19.3	U	2000	98.5		MS
Antimony	ug/L	75−125	48.8		1.00	U	50.0	97.4		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 540450 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S64−04082021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793760 **Duplicate ID:** 1204793761 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2200		2230		1.17		MS
Antimony	ug/L	+/−20	51.6		51.4		.334		MS
Arsenic	ug/L	+/−20	47.5		47.0		1.07		MS
Barium	ug/L	+/−20	57.3		56.3		1.8		MS
Beryllium	ug/L	+/−20	52.7		53.7		1.86		MS
Cadmium	ug/L	+/−20	49.9		50.5		1.11		MS
Calcium	ug/L	+/−20	9780		9470		3.23		MS
Chromium	ug/L	+/−20	48.5		47.9		1.39		MS
Cobalt	ug/L	+/−20	48.1		47.6		1.08		MS
Copper	ug/L	+/−20	129		127		2.13		MS
Iron	ug/L	+/−20	2140		2130		.383		MS
Lead	ug/L	+/−20	50.3		49.4		1.72		MS
Magnesium	ug/L	+/−20	3740		3720		.313		MS
Manganese	ug/L	+/−20	60.5		59.7		1.28		MS
Molybdenum	ug/L	+/−20	53.1		53.2		.256		MS
Nickel	ug/L	+/−20	49.8		48.9		1.97		MS
Potassium	ug/L	+/−20	3720		3640		2.26		MS
Selenium	ug/L	+/−20	48.4		47.6		1.68		MS
Silver	ug/L	+/−20	51.1		51.6		1.08		MS
Sodium	ug/L	+/−20	11800		11500		2.19		MS
Thallium	ug/L	+/−20	49.0		48.2		1.69		MS
Thorium	ug/L	+/−20	49.1		48.7		.841		MS
Uranium−235	ug/L	+/−20	0.400		0.403		.573		MS
Uranium−238	ug/L	+/−20	67.5		66.9		.917		MS
Vanadium	ug/L	+/−20	49.0		48.3		1.51		MS
Zinc	ug/L	+/−20	51.4		51.5		.224		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 540450 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S64−04082021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793760 **Duplicate ID:** 1204793761 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

Metals
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Duplicate Sample Summary

SDG No.: 540450 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S64−04082021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793770 **Duplicate ID:** 1204793771 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2020		1990		1.38		MS
Antimony	ug/L	+/−20	50.4		48.8		3.14		MS
Arsenic	ug/L	+/−20	46.9		46.6		.653		MS
Barium	ug/L	+/−20	56.2		54.9		2.35		MS
Beryllium	ug/L	+/−20	54.2		53.8		.672		MS
Cadmium	ug/L	+/−20	50.3		49.4		1.74		MS
Calcium	ug/L	+/−20	9500		9200		3.26		MS
Chromium	ug/L	+/−20	50.3		48.5		3.55		MS
Cobalt	ug/L	+/−20	49.4		48.4		2.09		MS
Copper	ug/L	+/−20	117		114		3.22		MS
Iron	ug/L	+/−20	2160		2040		5.39		MS
Lead	ug/L	+/−20	50.5		50.4		.214		MS
Magnesium	ug/L	+/−20	3640		3540		2.99		MS
Manganese	ug/L	+/−20	64.0		61.7		3.61		MS
Molybdenum	ug/L	+/−20	53.8		51.6		4.17		MS
Nickel	ug/L	+/−20	50.8		49.5		2.62		MS
Potassium	ug/L	+/−20	3690		3580		2.82		MS
Selenium	ug/L	+/−20	49.2		48.0		2.56		MS
Silver	ug/L	+/−20	52.5		51.2		2.64		MS
Sodium	ug/L	+/−20	12000		11600		3.19		MS
Thallium	ug/L	+/−20	49.0		49.0		.0653		MS
Thorium	ug/L	+/−20	49.2		49.5		.636		MS
Uranium−235	ug/L	+/−20	0.403		0.397		1.63		MS
Uranium−238	ug/L	+/−20	63.9		62.6		2.15		MS
Vanadium	ug/L	+/−20	50.1		49.2		1.78		MS
Zinc	ug/L	+/−20	52.2		50.1		4.12		MS

Metals
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Duplicate Sample Summary

SDG No.: 540450 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S64−04082021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793770 **Duplicate ID:** 1204793771 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
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Laboratory Control Sample Summary

SDG NO. 540450

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204793759								
	Aluminum	ug/L	2000	1940		96.8	80−120	MS
	Antimony	ug/L	50.0	50.7		101	80−120	MS
	Arsenic	ug/L	50.0	46.0		92.1	80−120	MS
	Barium	ug/L	50.0	49.3		98.6	80−120	MS
	Beryllium	ug/L	50.0	51.9		104	80−120	MS
	Cadmium	ug/L	50.0	49.0		97.9	80−120	MS
	Calcium	ug/L	2000	1970		98.6	80−120	MS
	Chromium	ug/L	50.0	46.0		92	80−120	MS
	Cobalt	ug/L	50.0	46.9		93.8	80−120	MS
	Copper	ug/L	50.0	48.1		96.2	80−120	MS
	Iron	ug/L	2000	1930		96.3	80−120	MS
	Lead	ug/L	50.0	49.5		99	80−120	MS
	Magnesium	ug/L	2000	1960		97.8	80−120	MS
	Manganese	ug/L	50.0	46.9		93.7	80−120	MS
	Molybdenum	ug/L	50.0	50.2		100	80−120	MS
	Nickel	ug/L	50.0	47.1		94.1	80−120	MS
	Potassium	ug/L	2000	1970		98.4	80−120	MS
	Selenium	ug/L	50.0	47.2		94.3	80−120	MS
	Silver	ug/L	50.0	50.6		101	80−120	MS
	Sodium	ug/L	2000	2030		101	80−120	MS
	Thallium	ug/L	50.0	48.3		96.5	80−120	MS
	Thorium	ug/L	50.0	47.9		95.9	80−120	MS
	Uranium−235	ug/L	0.360	0.355		98.7	80−120	MS
	Uranium−238	ug/L	49.6	49.4		99.5	80−120	MS
	Vanadium	ug/L	50.0	47.3		94.6	80−120	MS
	Zinc	ug/L	50.0	47.7		95.4	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Laboratory Control Sample Summary

SDG NO. 540450

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204793769								
	Aluminum	ug/L	2000	1890		94.6	80−120	MS
	Antimony	ug/L	50.0	46.8		93.6	80−120	MS
	Arsenic	ug/L	50.0	44.4		88.8	80−120	MS
	Barium	ug/L	50.0	47.0		93.9	80−120	MS
	Beryllium	ug/L	50.0	52.9		106	80−120	MS
	Cadmium	ug/L	50.0	47.9		95.7	80−120	MS
	Calcium	ug/L	2000	2030		101	80−120	MS
	Chromium	ug/L	50.0	46.0		92.1	80−120	MS
	Cobalt	ug/L	50.0	46.5		92.9	80−120	MS
	Copper	ug/L	50.0	47.0		93.9	80−120	MS
	Iron	ug/L	2000	1950		97.4	80−120	MS
	Lead	ug/L	50.0	48.7		97.5	80−120	MS
	Magnesium	ug/L	2000	1910		95.3	80−120	MS
	Manganese	ug/L	50.0	46.3		92.7	80−120	MS
	Molybdenum	ug/L	50.0	47.8		95.5	80−120	MS
	Nickel	ug/L	50.0	46.1		92.1	80−120	MS
	Potassium	ug/L	2000	1950		97.7	80−120	MS
	Selenium	ug/L	50.0	46.5		93	80−120	MS
	Silver	ug/L	50.0	49.6		99.3	80−120	MS
	Sodium	ug/L	2000	2040		102	80−120	MS
	Thallium	ug/L	50.0	48.3		96.5	80−120	MS
	Thorium	ug/L	50.0	47.6		95.1	80−120	MS
	Uranium−235	ug/L	0.360	0.357		99.2	80−120	MS
	Uranium−238	ug/L	49.6	48.8		98.3	80−120	MS
	Vanadium	ug/L	50.0	47.5		95	80−120	MS
	Zinc	ug/L	50.0	46.7		93.5	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 540450 **Client ID** MW−S64−04082021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540450003 **Serial Dilution ID:** 1204793762

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	195		189	J	3.542			MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	7.6		7.07	J	7.064			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	7720		7240		6.213		20	MS
Chromium	3	U	15	U				MS
Cobalt	.847	J	1.5	U	2.007			MS
Copper	84		80.5		4.174		20	MS
Iron	222		209	J	5.95			MS
Lead	.5	U	2.5	U				MS
Magnesium	1730		1650		4.803		20	MS
Manganese	13.8		13	J	5.642			MS
Molybdenum	1.53		1.83	J	19.608			MS
Nickel	2.56		3	U	8.239			MS
Potassium	1700		1560		8.181			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	9780		9460		3.261		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.0349	J	.05	U	4.011			MS
Uranium−238	16		15.5		2.931		20	MS
Vanadium	3.3	U	16.5	U				MS
Zinc	5.02	J	16.5	U	97.35			MS

METALS
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Serial Dilution Sample Summary

SDG NO.	540450	**Client ID**	MW-S64-04082021L
Contract:	DMAX00801		
Matrix:	LIQUID	**Level:**	Low
Sample ID:	540450003	**Serial Dilution ID:**	1204793762

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 540450 **Client ID** MW−S64−04082021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540450004 **Serial Dilution ID:** 1204793772

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	6.42		6.35	J	1.091			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	7290		6760		7.297		20	MS
Chromium	3	U	15	U				MS
Cobalt	.764	J	1.5	U	.524			MS
Copper	68.5		65.7		4.062		20	MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	1560		1430		8.041		20	MS
Manganese	14.4		13.6	J	5.437			MS
Molybdenum	1.78		2.08	J	16.901			MS
Nickel	2.4		3	U	9.034			MS
Potassium	1610		1450	J	9.746			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	9600		9280		3.257		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.0249	J	.05	U	4.418			MS
Uranium−238	11.3		10.7		5.543		20	MS
Vanadium	3.3	U	16.5	U				MS
Zinc	8.75	J	16.5	U	18.574			MS

METALS
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Serial Dilution Sample Summary

SDG NO. 540450 **Client ID:** MW-S64-04082021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540450004 **Serial Dilution ID:** 1204793772

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 540450 **Method Type**: MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2114307							
1204793758	MB for batch 2114307	MB	G	13−APR−21	50mL	50mL	
1204793759	LCS for batch 2114307	LCS	G	13−APR−21	50mL	50mL	
1204793760	MW−S64−04082021S	MS	G	13−APR−21	50mL	50mL	
1204793761	MW−S64−04082021SD	MSD	G	13−APR−21	50mL	50mL	
540450001	MW−SD43−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450002	MW−SD43−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450003	MW−S64−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450005	MW−BS21−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450006	MW−BS21−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450007	MW−SD34−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450008	MW−SD34−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450009	MW−SD34−04082021DUP	SAMPLE	G	13−APR−21	50mL	50mL	
540450010	MW−SD34−04082021DUP	SAMPLE	G	13−APR−21	50mL	50mL	
540450011	BEW−1−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
Batch Number 2114311							
1204793768	MB for batch 2114311	MB	G	13−APR−21	50mL	50mL	
1204793769	LCS for batch 2114311	LCS	G	13−APR−21	50mL	50mL	
1204793770	MW−S64−04082021S	MS	G	13−APR−21	50mL	50mL	
1204793771	MW−S64−04082021SD	MSD	G	13−APR−21	50mL	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 540450 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
540450004	MW−S64−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450012	BEW−1−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450013	ML−1−3−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450014	ML−1−3−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450015	MW−S38−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450016	MW−S38−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450017	HA20−CMT−2S−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450018	HA20−CMT−2S−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450019	SW−1−04082021	SAMPLE	G	13−APR−21	50mL	50mL	
540450020	SW−1−04082021	SAMPLE	G	13−APR−21	50mL	50mL	

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540450

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 04-MAY-21 **End Date:** 05-MAY-21 **Data File:** 210504-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	17:53:59																							X	X		
S10	1	17:55:46																							X	X		
S100	1	17:57:32																							X	X		
ICV01	1	17:59:19																							X	X		
ICB01	1	18:01:07																							X	X		
CRDL01	1	18:03:19																							X	X		
ICSA01	1	18:05:08																							X	X		
ICSAB01	1	18:06:56																							X	X		
CCV01	1	18:08:44																							X	X		
CCB01	1	18:10:32																							X	X		
1204793758	1	18:12:20																							X	X		
1204793759	1	18:14:06																							X	X		
540450001	1	18:15:53																							X	X		
540450002	1	18:17:39																							X	X		
540450003	1	18:19:26																							X	X		
1204793760	1	18:21:12																							X	X		
1204793761	1	18:22:59																							X	X		
ZZZZZZ	1	18:24:46																										
1204793762	5	18:26:32																							X	X		
CCV02	1	18:28:20																							X	X		
CCB02	1	18:30:07																							X	X		
540450005	1	18:31:54																							X	X		
540450006	1	18:33:41																							X	X		
540450007	1	18:35:27																							X	X		
540450008	1	18:37:14																							X	X		
540450009	1	18:39:01																							X	X		
540450010	1	18:40:47																							X	X		
ZZZZZZ	1	18:42:34																										
CCV03	1	18:44:20																							X	X		
CCB03	1	18:46:08																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540450

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 04-MAY-21 **End Date:** 05-MAY-21 **Data File:** 210504-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	23:09:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	23:13:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	23:17:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	23:20:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	23:24:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	23:28:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	23:31:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	23:35:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	23:38:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	23:42:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	23:46:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	23:49:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	23:53:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	23:57:07																										
ZZZZZZ	1	00:00:44																										
ZZZZZZ	1	00:04:21																										
ZZZZZZ	1	00:07:58																										
ZZZZZZ	1	00:11:35																										
ZZZZZZ	1	00:15:11																										
ZZZZZZ	5	00:18:48																										
CCV	1	00:22:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	00:26:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:29:39																										
ZZZZZZ	1	00:33:16																										
ZZZZZZ	1	00:36:53																										
ZZZZZZ	1	00:40:29																										
ZZZZZZ	1	00:44:06																										
ZZZZZZ	1	00:47:43																										
ZZZZZZ	1	00:51:20																										
ZZZZZZ	1	00:54:57																										
ZZZZZZ	1	00:58:33																										
CCV03	1	01:02:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	01:05:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793758	1	01:09:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793759	1	01:13:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450001	1	01:16:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450002	1	01:20:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450003	1	01:23:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793760	1	01:27:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793761	1	01:31:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	01:34:44																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540450

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 04-MAY-21 **End Date:** 05-MAY-21 **Data File:** 210504-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
1204793762	5	01:38:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	01:41:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	01:45:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450005	1	01:49:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450006	1	01:52:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450007	1	01:56:27	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450008	1	02:00:04	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450009	1	02:03:41	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450010	1	02:07:17	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540450011	1	02:10:54	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV05	1	02:14:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	02:18:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540450

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 04-MAY-21 **End Date:** 05-MAY-21 **Data File:** 210504-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	07:28:21																							X	X		
S10	1	07:30:08																							X	X		
S100	1	07:31:55																							X	X		
ICV01	1	07:33:42																							X	X		
ICB01	1	07:35:29																							X	X		
CRDL01	1	07:37:17																							X	X		
ICSA01	1	07:39:05																							X	X		
ICSAB01	1	07:40:53																							X	X		
CCV01	1	07:42:40																							X	X		
CCB01	1	07:44:28																							X	X		
ZZZZZZ	1	07:46:16																										
ZZZZZZ	1	07:48:02																										
540450011	2	07:49:50																							X	X		
CCV02	1	07:51:37																							X	X		
CCB02	1	07:53:25																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL | **Client Sdg:** 540450

Inst Name: ICPMS15 | **Instrument Type:** MS

Start Date: 05-MAY-21 | **End Date:** 05-MAY-21 | **Data File:** 210505-10

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	18:03:37	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	18:07:13	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	18:10:50	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	18:14:26	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	18:18:03	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	18:21:39	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	18:25:15	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	18:28:51	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	18:32:28	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	18:36:04	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	18:39:41	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	18:43:17	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	18:46:54	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204793768	1	18:50:30	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204793769	1	18:54:07	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540450004	1	18:57:43	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204793770	1	19:01:20	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204793771	1	19:04:56	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	19:08:33																										
1204793772	5	19:12:09	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV03	1	19:15:47	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	19:19:23	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540450012	1	19:23:00	X	X	X	X	X	X		X	X	X		X		X	X	X	X	X	X	X	X	X			X	X
540450013	1	19:26:37	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540450014	1	19:30:13	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X			X	X
540450015	1	19:33:50	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X			X	X
540450016	1	19:37:27	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X			X	X
540450017	1	19:41:03	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540450018	1	19:44:40	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540450019	1	19:48:16	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540450020	1	19:51:53	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	19:55:31	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	19:59:07	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL | **Client Sdg:** 540450

Inst Name: ICPMS15 | **Instrument Type:** MS

Start Date: 05-MAY-21 | **End Date:** 05-MAY-21 | **Data File:** 210505-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	12:15:42							X																			
S10	1	12:17:34							X																			
S100	1	12:19:25							X																			
ICV01	1	12:21:17							X																			
ICB01	1	12:23:08							X																			
CRDL01	1	12:25:00							X																			
ICSA01	1	12:26:52							X																			
ICSAB01	1	12:28:43							X																			
CCV01	1	12:30:36							X																			
CCB01	1	12:32:27							X																			
LR01	1	12:34:20							X																			
CCV02	1	12:36:12							X																			
CCB02	1	12:38:04							X																			
ZZZZZZ	1	12:39:56																										
ZZZZZZ	1	12:41:48																										
540450007	10	12:43:40							X																			
540450008	10	12:45:32							X																			
540450009	10	12:47:24							X																			
540450010	10	12:49:15							X																			
540450011	10	12:51:07							X																			
CCV03	1	12:53:00							X																			
CCB03	1	12:54:52							X																			

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540450

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 06-MAY-21 **End Date:** 06-MAY-21 **Data File:** 210506-11

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	10:47:17																							X	X		
S10	1	10:49:04																							X	X		
S100	1	10:50:50																							X	X		
ICV01	1	10:52:37																							X	X		
ICB01	1	10:54:24																							X	X		
CRDL01	1	10:56:12																							X	X		
ICSA01	1	10:58:00																							X	X		
ICSAB01	1	10:59:48																							X	X		
CCV01	1	11:01:36																							X	X		
CCB01	1	11:03:24																							X	X		
1204793768	1	11:05:11																							X	X		
1204793769	1	11:06:58																							X	X		
540450004	1	11:08:45																							X	X		
1204793770	1	11:10:32																							X	X		
1204793771	1	11:12:19																							X	X		
ZZZZZZ	1	11:14:05																										
1204793772	5	11:15:52																							X	X		
CCV02	1	11:17:40																							X	X		
CCB02	1	11:19:28																							X	X		
ZZZZZZ	1	11:21:15																										
540450013	1	11:23:02																							X	X		
540450014	1	11:24:49																							X	X		
540450015	1	11:26:36																							X	X		
540450016	1	11:28:23																							X	X		
540450017	1	11:30:10																							X	X		
540450018	1	11:31:57																							X	X		
540450019	1	11:33:43																							X	X		
540450020	1	11:35:30																							X	X		
540450012	2	11:37:27																							X	X		
CCV03	1	11:39:15																							X	X		
CCB03	1	11:41:02																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540450

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 06-MAY-21 **End Date:** 06-MAY-21 **Data File:** 210506-13

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	13:46:42							X						X	X												
S10	1	13:50:19							X						X	X												
S100	1	13:53:56							X						X	X												
ICV01	1	13:57:33							X						X	X												
ICB01	1	14:01:10							X						X	X												
CRDL01	1	14:04:47							X						X	X												
ICSA01	1	14:08:23							X						X	X												
ICSAB01	1	14:11:58							X						X	X												
CCV01	1	14:15:35							X						X	X												
CCB01	1	14:19:11							X						X	X												
LR01	1	14:22:47							X						X	X												
CCV02	1	14:26:23							X						X	X												
CCB02	1	14:30:00							X						X	X												
ZZZZZZ	1	14:33:37																										
ZZZZZZ	1	14:37:13																										
ZZZZZZ	1	14:40:50																										
ZZZZZZ	1	14:44:27																										
ZZZZZZ	1	14:48:04																										
ZZZZZZ	1	14:51:40																										
ZZZZZZ	1	14:55:16																										
ZZZZZZ	1	14:58:53																										
CCV	1	15:02:32							X						X	X												
CCB	1	15:06:08							X						X	X												
ZZZZZZ	1	15:09:46																										
ZZZZZZ	1	15:13:22																										
ZZZZZZ	1	15:16:59																										
ZZZZZZ	1	15:20:36																										
ZZZZZZ	1	15:24:13																										
ZZZZZZ	1	15:27:49																										
ZZZZZZ	1	15:31:26																										
ZZZZZZ	5	15:35:03																										
CCV03	1	15:38:41							X						X	X												
CCB03	1	15:42:18							X						X	X												
ZZZZZZ	1	15:45:55																										
ZZZZZZ	1	15:49:32																										
ZZZZZZ	1	15:53:09																										
ZZZZZZ	1	15:56:46																										
ZZZZZZ	10	16:05:49																										
ZZZZZZ	10	16:09:26																										
540450012	10	16:15:39							X						X													
540450014	10	16:19:16													X													

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540450

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 06-MAY-21 **End Date:** 06-MAY-21 **Data File:** 210506-13

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
540450015	10	16:22:52														X												
540450016	10	16:26:29														X												
CCV04	1	16:30:08							X						X	X												
CCB04	1	16:33:45							X						X	X												

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540450

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 06-MAY-21 **End Date:** 06-MAY-21 **Data File:** 210506-16

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:27:04											X															
S10	1	19:28:56											X															
S100	1	19:30:47											X															
ICV01	1	19:32:39											X															
ICB01	1	19:34:31											X															
CRDL01	1	19:36:22											X															
ICSA01	1	19:38:14											X															
ICSAB01	1	19:40:05											X															
CCV01	1	19:41:58											X															
CCB01	1	19:43:50											X															
LR01	1	19:45:42											X															
CCV02	1	19:47:34											X															
CCB02	1	19:49:25											X															
ZZZZZZ	1	19:51:17																										
ZZZZZZ	1	19:53:09																										
ZZZZZZ	1	19:55:01																										
ZZZZZZ	1	19:56:52																										
ZZZZZZ	1	19:58:44																										
ZZZZZZ	1	20:00:35																										
ZZZZZZ	5	20:02:27																										
ZZZZZZ	1	20:04:19																										
ZZZZZZ	1	20:06:10																										
CCV	1	20:08:04											X															
CCB	1	20:09:55											X															
ZZZZZZ	1	20:11:47																										
ZZZZZZ	1	20:13:39																										
ZZZZZZ	1	20:15:30																										
ZZZZZZ	1	20:17:22																										
ZZZZZZ	1	20:19:14																										
ZZZZZZ	1	20:21:05																										
ZZZZZZ	1	20:22:57																										
ZZZZZZ	1	20:24:49																										
ZZZZZZ	1	20:26:40																										
CCV03	1	20:28:32											X															
CCB03	1	20:30:24											X															
1204793768	1	20:32:16											X															
1204793769	1	20:34:08											X															
540450004	1	20:35:59											X															
1204793770	1	20:37:51											X															
1204793771	1	20:39:43											X															
ZZZZZZ	1	20:41:34																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540450

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 06-MAY-21 **End Date:** 06-MAY-21 **Data File:** 210506-16

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
1204793772	5	20:43:26											X															
CCV04	1	20:45:18											X															
CCB04	1	20:47:10											X															
540450012	1	20:49:03											X															
540450013	1	20:50:54											X															
540450014	1	20:52:46											X															
540450015	1	20:54:37											X															
540450016	1	20:56:29											X															
540450017	1	20:58:21											X															
540450018	1	21:00:12											X															
540450019	1	21:02:04											X															
540450020	1	21:03:56											X															
CCV05	1	21:05:48											X															
CCB05	1	21:07:40											X															

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 540450

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
ICP/MS				
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 540450

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2114307**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204793759	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204793759	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204793760	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204793760	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204793761	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204793761	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	**Prep Date**	**Matrix**	**Initial Volume (mL)**	**Hot Block Stop Date (date)**	**Final Volume (mL)**	**Prep Factor (mL/mL)**	**pH Check**
1204793758 MB	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793759 LCS	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450001	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450002	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450003	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793762 SDILT (540450003)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793760 MS (540450003)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793761 MSD (540450003)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450005	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450006	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450007	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450008	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450009	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450010	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450011	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2

Reagent/Solvent Lot ID	**Description**	**Amount**
3265774	HYDROCHLORIC ACID	2.5 mL
3279375	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 93 C
Temperature within limits (Y/N)?: y
Thermometer ID: 118631
Hot Block ID: 2
Digestion tube lot #: 2012333

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2114311**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204793769	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204793769	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204793770	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204793770	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204793771	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204793771	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204793768 MB	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793769 LCS	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450004	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793772 SDILT (540450004)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793770 MS (540450004)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793771 MSD (540450004)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450012	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450013	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450014	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450015	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450016	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450017	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450018	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450019	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540450020	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3265774	HYDROCHLORIC ACID	2.5 mL
3279375	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 92 C
Temperature within limits (Y/N)?: y
Thermometer ID: 1120212072
Hot Block ID: 11
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 06, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 540451

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 10, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540451

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540451

May 06, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 10, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
540451001	MW-BS17-04072021
540451002	MW-BS17-04072021
540451003	MW-SD62A-04072021
540451004	MW-SD62A-04072021
540451005	HB-11-04072021
540451006	HB-11-04072021
540451007	HA20-CMT-1S-04072021
540451008	HA20-CMT-1S-04072021
540451009	MW-BS39-04072021
540451010	MW-BS39-04072021
540451011	MW-S14-04072021
540451012	MW-S14-04072021
540451013	MW-SD63-04072021
540451014	MW-SD63-04072021
540451015	MW-BS12-04072021
540451016	MW-BS12-04072021
540451017	EQ Blank1-04072021
540451018	EQ Blank1-04072021
540451019	HA20-CMT-1I-04072021
540451020	HA20-CMT-1I-04072021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page: 1 of 3
Project # 3252H
GEL Quote #: GELP18-1125
COC Number (1): 04072021
PO Number:

GEL Laboratories LLC
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
gel.com
Chain of Custody and Analytical Request

540451

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) NI	Dissolved Metals (6020A ICP-MS) NI	U-235/U-238 plus Total U Calc. NI	Comments Note: extra sample is required for sample specific QC
												<-- Preservative Type (6)
MW-BS17-04072021	4/7/2021	9:30	N	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
MW-SD62A-04072021	4/7/2021	9:30	N	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
HB-11-04072021	4/7/2021	9:55	N	Y	GW	U238		2	X	X	X	
HA20-CMT-1S-04072021	4/7/2021	10:20	N	Y	GW	U238		2	X	X	X	
MW-BS39-04072021	4/7/2021	11:00	N	Y	GW	U238		2	X	X	X	
MW-S14-04072021	4/7/2021	11:00	N	Y	GW	U238		2	X	X	X	
MW-SD63-04072021	4/7/2021	11:30	N	Y	GW	U238		2	X	X	X	
MW-BS12-04072021	4/7/2021	11:30	N	Y	GW	U238		2	X	X	X	U-235/U-238 plus Total U Calc. for Total and Dissolved
EQ Blank1-04072021	4/7/2021	12:00	N	Y	GW	U238		2	X	X	X	
HA20-CMT-1I-04072021	4/7/2021	12:45	N	Y	GW	U238		2	X	X	X	

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/9/21	11:00	1	[signature]	4/9/21	1100
2	[signature]	4/9/21	1600	2	[signature]	4/10/21	950
3				3			

TAT Requested: Normal: X Rush: ____ Specify: ______
Fax Results: [ ] Yes [X] No
Select Deliverable: [X] C of A [X] QC Summary [X] Level 5
Additional Remarks:
For Lab Receiving Use Only: Custody Seal Intact? [ ] *Yes* [ ] *No* *Cooler Temp:* _____ *°C*

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)
Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via NaI MM

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 540451
Received By: Stacy Boone	Date Received: 4/10/21
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:_______
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AJ Date 4/12/21 Page 1 of 2

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC **SAMPLE RECEIPT & REVIEW CONTINUATION FORM**

Client: DMAX Received By: SB Date Received: 4/10/21 SDG/AR/COC/Work Order: 540451

7734	0170	1615	2°c
"	"	1707	3°c
"	"	1351	4°c
"	"	1590	5°c
7734	0445	7137	3°c
"	"	7089	3°c
"	"	6737	4°c
"	"	7090	5°c
"	"	7663	4°c

PM (or PMA) review: Initials CD Date 4/12/21 Page 2 of 2

Work Order Containers

Sample ID: **540451001**
Client Sample ID: **MW−BS17−04072021**
Description: **Ground Water**

Label: 540451001.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451001.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451002**
Client Sample ID: **MW−BS17−04072021**
Description: **Dissolved Ground Water**

Label: 540451002.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451002.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451003**
Client Sample ID: **MW−SD62A−04072021**
Description: **Ground Water**

Label: 540451003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to

Work Order Containers

Sample ID: **540451003**
Client Sample ID: **MW−SD62A−04072021**
Description: **Ground Water**

Label: 540451003.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451003.01.01	Type: New Undefined	
28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451004**
Client Sample ID: **MW−SD62A−04072021**
Description: **Dissolved Ground Water**

Label: 540451004.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451004.01.01	Type: New Undefined	
28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451005**
Client Sample ID: **HB−11−04072021**
Description: **Ground Water**

Label: 540451005.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540451005**
Client Sample ID: **HB−11−04072021**
Description: **Ground Water**

Label: 540451005.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451006**
Client Sample ID: **HB−11−04072021**
Description: **Dissolved Ground Water**

Label: 540451006.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451006.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451007**
Client Sample ID: **HA20−CMT−1S−04072021**
Description: **Ground Water**

Label: 540451007.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451007.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540451008**
Client Sample ID: **HA20−CMT−1S−04072021**
Description: **Dissolved Ground Water**

Label: 540451008.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451008.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451009**
Client Sample ID: **MW−BS39−04072021**
Description: **Ground Water**

Label: 540451009.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451009.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451010**
Client Sample ID: **MW−BS39−04072021**
Description: **Dissolved Ground Water**

Label: 540451010.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to

Work Order Containers

Sample ID: **540451010**
Client Sample ID: **MW−BS39−04072021**
Description: **Dissolved Ground Water**

Label: 540451010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451010.01.01	**Type: New Undefined**	
28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451011**
Client Sample ID: **MW−S14−04072021**
Description: **Ground Water**

Label: 540451011.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451011.01.01	**Type: New Undefined**	
28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451012**
Client Sample ID: **MW−S14−04072021**
Description: **Dissolved Ground Water**

Label: 540451012.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540451012**
Client Sample ID: **MW−S14−04072021**
Description: **Dissolved Ground Water**

Label: 540451012.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451013**
Client Sample ID: **MW−SD63−04072021**
Description: **Ground Water**

Label: 540451013.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451013.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451014**
Client Sample ID: **MW−SD63−04072021**
Description: **Dissolved Ground Water**

Label: 540451014.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451014.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540451015**
Client Sample ID: **MW−BS12−04072021**
Description: **Ground Water**

Label: 540451015.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540451015.01.01	**Type: New Undefined**	
28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451016**
Client Sample ID: **MW−BS12−04072021**
Description: **Dissolved Ground Water**

Label: 540451016.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540451016.01.01	**Type: New Undefined**	
28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451017**
Client Sample ID: **EQ Blank1−04072021**
Description: **Ground Water**

Label: 540451017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to

Work Order Containers

Sample ID: **540451017**
Client Sample ID: **EQ Blank1−04072021**
Description: **Ground Water**

Label: 540451017.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451017.01.01	Type: New Undefined	
28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451018**
Client Sample ID: **EQ Blank1−04072021**
Description: **Dissolved Ground Water**

Label: 540451018.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451018.01.01	Type: New Undefined	
28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451019**
Client Sample ID: **HA20−CMT−1I−04072021**
Description: **Ground Water**

Label: 540451019.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540451019**
Client Sample ID: **HA20−CMT−1I−04072021**
Description: **Ground Water**

Label: 540451019.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540451020**
Client Sample ID: **HA20−CMT−1I−04072021**
Description: **Dissolved Ground Water**

Label: 540451020.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:20:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 19:11:36	Hannah Hatherly	Transfered custody to batch 2114315
12−APR−21 19:11:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:05:43	Hannah Hatherly	Changed batch_id from 2114315 to
12−APR−21 23:05:43	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:25:15	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540451020.01.01 **Type: New Undefined**

28−APR−21 17:08:14	Paul Boyd	Transfered custody to batch 2114317
28−APR−21 17:08:14	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 06 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 540451

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batch:</u> 2114317

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2123947

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batch:</u> 2114315

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
540451001	MW-BS17-04072021
540451002	MW-BS17-04072021
540451003	MW-SD62A-04072021
540451004	MW-SD62A-04072021
540451005	HB-11-04072021
540451006	HB-11-04072021
540451007	HA20-CMT-1S-04072021
540451008	HA20-CMT-1S-04072021
540451009	MW-BS39-04072021
540451010	MW-BS39-04072021
540451011	MW-S14-04072021
540451012	MW-S14-04072021
540451013	MW-SD63-04072021
540451014	MW-SD63-04072021
540451015	MW-BS12-04072021
540451016	MW-BS12-04072021
540451017	EQ Blank1-04072021
540451018	EQ Blank1-04072021
540451019	HA20-CMT-1I-04072021
540451020	HA20-CMT-1I-04072021
1204793781	Method Blank (MB)**ICP-MS**
1204793782	Laboratory Control Sample (LCS)
1204793785	540451001(MW-BS17-04072021L) Serial Dilution (SD)
1204793783	540451001(MW-BS17-04072021S) Matrix Spike (MS)
1204793784	540451001(MW-BS17-04072021SD) Matrix Spike Duplicate (MSD)

Samples 540451001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements
The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. ICP-MS.

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 540451009 (MW-BS39-04072021), 540451010 (MW-BS39-04072021), 540451013 (MW-SD63-04072021) and 540451014 (MW-SD63-04072021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	540451			
	009	**010**	**013**	**014**
Sodium	10X	10X	1X	1X
Uranium-238	1X	1X	2X	2X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 540451 GEL Work Order: 540451

The Qualifiers in this report are defined as follows:

*   Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
**   Indicates analyte is a surrogate compound.
J   Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U   Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name:** **Jamie Johnson**

Date: **06 MAY 2021**   **Title:** **Group Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451001 **BASIS:** As Received **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-BS17-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-38-2	Arsenic	5.45	ug/L		2.00	5.00	5.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-39-3	Barium	29.0	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-70-2	Calcium	21400	ug/L		80.0	200	200	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-48-4	Cobalt	1.13	ug/L		0.300	1.00	1.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7439-89-6	Iron	766	ug/L		33.0	100	100	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7439-95-4	Magnesium	5730	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7439-96-5	Manganese	689	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7439-98-7	Molybdenum	1.19	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-02-0	Nickel	0.713	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-09-7	Potassium	3400	ug/L		80.0	300	300	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-23-5	Sodium	10900	ug/L		80.0	250	250	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-61-1	Total Uranium	0.856	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:28	210429-2	2114317
7440-61-1	Uranium-238	0.856	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:28	210429-2	2114317
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 06:24	210428-1	2114317
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 06:24	210428-1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451002 **BASIS:** Filtered **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−BS17−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−38−2	Arsenic	2.87	ug/L	J	2.00	5.00	5.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−39−3	Barium	27.3	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−70−2	Calcium	22000	ug/L		80.0	200	200	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−48−4	Cobalt	0.983	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7439−89−6	Iron	376	ug/L		33.0	100	100	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7439−95−4	Magnesium	5730	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7439−96−5	Manganese	646	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7439−98−7	Molybdenum	1.13	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−02−0	Nickel	0.946	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−09−7	Potassium	3530	ug/L		80.0	300	300	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−23−5	Sodium	11000	ug/L		80.0	250	250	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−61−1	Total Uranium	0.697	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:41	210429−2	2114317
7440−61−1	Uranium−238	0.697	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:41	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 06:49	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 06:49	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451003 **BASIS:** As Received **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-SD62A-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-39-3	Barium	4.23	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-70-2	Calcium	23200	ug/L		80.0	200	200	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-48-4	Cobalt	0.319	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-50-8	Copper	20.9	ug/L		0.300	2.00	2.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7439-95-4	Magnesium	5210	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7439-96-5	Manganese	2.95	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7439-98-7	Molybdenum	2.04	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-02-0	Nickel	1.14	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-09-7	Potassium	3560	ug/L		80.0	300	300	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-23-5	Sodium	26800	ug/L		80.0	250	250	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-61-1	Total Uranium	78.5	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.165	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:42	210429-2	2114317
7440-61-1	Uranium-238	78.3	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:42	210429-2	2114317
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 06:53	210428-1	2114317
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 06:53	210428-1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451004 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-SD62A-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-39-3	Barium	4.19	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-70-2	Calcium	23100	ug/L		80.0	200	200	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-48-4	Cobalt	0.315	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-50-8	Copper	20.7	ug/L		0.300	2.00	2.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7439-95-4	Magnesium	5200	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7439-96-5	Manganese	2.88	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7439-98-7	Molybdenum	2.06	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-02-0	Nickel	1.19	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-09-7	Potassium	3570	ug/L		80.0	300	300	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-23-5	Sodium	26900	ug/L		80.0	250	250	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-61-1	Total Uranium	68.7	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.144	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:44	210429-2	2114317
7440-61-1	Uranium-238	68.6	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:44	210429-2	2114317
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 06:56	210428-1	2114317
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 06:56	210428-1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451005 **BASIS:** As Received **DATE COLLECTED** 07-APR-21

CLIENT ID: HB-11-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	98.0	ug/L		19.3	50.0	50.0	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-39-3	Barium	14.9	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-70-2	Calcium	5950	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-48-4	Cobalt	4.04	ug/L		0.300	1.00	1.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-50-8	Copper	1.93	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7439-89-6	Iron	413	ug/L		33.0	100	100	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7439-95-4	Magnesium	1670	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7439-96-5	Manganese	486	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7439-98-7	Molybdenum	0.723	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-02-0	Nickel	12.6	ug/L		0.600	2.00	2.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-09-7	Potassium	2060	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-23-5	Sodium	5420	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-61-1	Total Uranium	0.342	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:46	210429-2	2114317
7440-61-1	Uranium-238	0.342	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:46	210429-2	2114317
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:00	210428-1	2114317
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:00	210428-1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451006 **BASIS:** Filtered **DATE COLLECTED** 07−APR−21

CLIENT ID: HB−11−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	57.3	ug/L		19.3	50.0	50.0	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−39−3	Barium	14.7	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−70−2	Calcium	6020	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−48−4	Cobalt	3.60	ug/L		0.300	1.00	1.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−50−8	Copper	1.76	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7439−89−6	Iron	252	ug/L		33.0	100	100	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7439−95−4	Magnesium	1680	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7439−96−5	Manganese	466	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7439−98−7	Molybdenum	0.742	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−02−0	Nickel	7.57	ug/L		0.600	2.00	2.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−09−7	Potassium	2050	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−23−5	Sodium	5530	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−61−1	Total Uranium	0.242	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:48	210429−2	2114317
7440−61−1	Uranium−238	0.242	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:48	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:03	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:03	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451007 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: HA20−CMT−1S−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−39−3	Barium	25.7	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−70−2	Calcium	27000	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−48−4	Cobalt	0.425	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7439−95−4	Magnesium	6690	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7439−96−5	Manganese	10.6	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7439−98−7	Molybdenum	0.250	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−02−0	Nickel	1.16	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−09−7	Potassium	3500	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−23−5	Sodium	28900	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−61−1	Total Uranium	0.0954	ug/L	J	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:50	210429−2	2114317
7440−61−1	Uranium−238	0.0954	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:50	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:07	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:07	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451008 **BASIS:** Filtered **DATE COLLECTED** 07−APR−21

CLIENT ID: HA20−CMT−1S−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−39−3	Barium	25.3	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−70−2	Calcium	26500	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−48−4	Cobalt	0.411	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−50−8	Copper	0.588	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7439−95−4	Magnesium	6630	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7439−96−5	Manganese	10.3	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7439−98−7	Molybdenum	0.276	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−02−0	Nickel	1.04	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−09−7	Potassium	3480	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−23−5	Sodium	28600	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−61−1	Total Uranium	0.350	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:51	210429−2	2114317
7440−61−1	Uranium−238	0.350	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:51	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:10	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:10	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451009 **BASIS:** As Received **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-BS39-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	187	ug/L		19.3	50.0	50.0	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-39-3	Barium	17.1	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-70-2	Calcium	4000	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-48-4	Cobalt	0.432	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-50-8	Copper	1.73	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7439-89-6	Iron	739	ug/L		33.0	100	100	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7439-95-4	Magnesium	3010	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7439-96-5	Manganese	9.30	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7439-98-7	Molybdenum	11.9	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-02-0	Nickel	1.58	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-09-7	Potassium	37400	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-23-5	Sodium	55200	ug/L		800	2500	2500	10	MS	PRB	04/29/21 11:57	210429-3	2114317
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:57	210429-2	2114317
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:57	210429-2	2114317
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:14	210428-1	2114317
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:14	210428-1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451010 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-BS39-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-39-3	Barium	14.5	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-70-2	Calcium	3460	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7439-95-4	Magnesium	2860	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7439-98-7	Molybdenum	11.9	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-02-0	Nickel	1.07	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-09-7	Potassium	37600	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-23-5	Sodium	55600	ug/L		800	2500	2500	10	MS	PRB	04/29/21 11:58	210429-3	2114317
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 10:58	210429-2	2114317
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/29/21 10:58	210429-2	2114317
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:17	210428-1	2114317
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:17	210428-1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451011 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−S14−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	207	ug/L		19.3	50.0	50.0	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−39−3	Barium	2.73	ug/L	J	0.670	4.00	4.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−70−2	Calcium	4910	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−50−8	Copper	0.602	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7439−89−6	Iron	82.8	ug/L	J	33.0	100	100	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7439−95−4	Magnesium	1410	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7439−96−5	Manganese	2.93	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7439−98−7	Molybdenum	0.217	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−09−7	Potassium	819	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−23−5	Sodium	6400	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:00	210429−2	2114317
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/29/21 11:00	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:21	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:21	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451012 **BASIS:** Filtered **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−S14−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−39−3	Barium	2.08	ug/L	J	0.670	4.00	4.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−70−2	Calcium	4860	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−50−8	Copper	0.316	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7439−95−4	Magnesium	1370	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7439−96−5	Manganese	1.48	ug/L	J	1.00	5.00	5.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−09−7	Potassium	795	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−23−5	Sodium	6340	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:02	210429−2	2114317
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/29/21 11:02	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:32	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:32	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451013 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−SD63−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−39−3	Barium	4.37	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−70−2	Calcium	21300	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−48−4	Cobalt	0.301	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−50−8	Copper	19.7	ug/L		0.300	2.00	2.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7439−95−4	Magnesium	5110	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7439−96−5	Manganese	6.43	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7439−98−7	Molybdenum	5.52	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−02−0	Nickel	0.907	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−09−7	Potassium	3620	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−23−5	Sodium	32300	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−61−1	Total Uranium	130	ug/L		0.134	0.400	0.400			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.242	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:04	210429−2	2114317
7440−61−1	Uranium−238	130	ug/L		0.134	0.400	0.400	2	MS	PRB	04/29/21 11:06	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:35	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:35	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451014 **BASIS:** Filtered **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−SD63−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−39−3	Barium	4.31	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−70−2	Calcium	21200	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−50−8	Copper	20.3	ug/L		0.300	2.00	2.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7439−95−4	Magnesium	5080	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7439−96−5	Manganese	6.33	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7439−98−7	Molybdenum	5.64	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−02−0	Nickel	0.915	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−09−7	Potassium	3580	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−23−5	Sodium	32100	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−61−1	Total Uranium	117	ug/L		0.134	0.400	0.400			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.225	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:07	210429−2	2114317
7440−61−1	Uranium−238	117	ug/L		0.134	0.400	0.400	2	MS	PRB	04/29/21 11:09	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:39	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:39	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451015 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−BS12−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	1970	ug/L		19.3	50.0	50.0	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−38−2	Arsenic	43.5	ug/L		2.00	5.00	5.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−39−3	Barium	28.1	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−70−2	Calcium	29400	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−50−8	Copper	1.90	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7439−89−6	Iron	47.4	ug/L	J	33.0	100	100	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7439−95−4	Magnesium	119	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7439−96−5	Manganese	6.61	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7439−98−7	Molybdenum	8.91	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−02−0	Nickel	1.00	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−09−7	Potassium	6220	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−23−5	Sodium	18700	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−61−1	Total Uranium	8.17	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0585	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:15	210429−2	2114317
7440−61−1	Uranium−238	8.11	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/29/21 11:15	210429−2	2114317
7440−62−2	Vanadium	33.1	ug/L		3.30	20.0	20.0	1	MS	PRB	04/29/21 07:42	210428−1	2114317
7440−66−6	Zinc	18.4	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:42	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451016 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-BS12-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1600	ug/L		19.3	50.0	50.0	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-38-2	Arsenic	38.5	ug/L		2.00	5.00	5.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-39-3	Barium	20.5	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-70-2	Calcium	27300	ug/L		80.0	200	200	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-50-8	Copper	1.01	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7439-95-4	Magnesium	107	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7439-98-7	Molybdenum	8.63	ug/L		0.200	1.00	1.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-02-0	Nickel	0.836	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-09-7	Potassium	5970	ug/L		80.0	300	300	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-23-5	Sodium	17800	ug/L		80.0	250	250	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-61-1	Total Uranium	7.69	ug/L		0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0521	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:16	210429-2	2114317
7440-61-1	Uranium-238	7.64	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/29/21 11:16	210429-2	2114317
7440-62-2	Vanadium	30.8	ug/L		3.30	20.0	20.0	1	MS	PRB	04/29/21 07:46	210428-1	2114317
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:46	210428-1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451017 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: EQ Blank1−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−39−3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−70−2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7439−95−4	Magnesium	10.0	ug/L	U	10.0	30.0	30.0	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−09−7	Potassium	80.0	ug/L	U	80.0	300	300	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−23−5	Sodium	80.0	ug/L	U	80.0	250	250	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:18	210429−2	2114317
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/29/21 11:18	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:49	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:49	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451018 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: EQ Blank1-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-39-3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-70-2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7439-95-4	Magnesium	10.0	ug/L	U	10.0	30.0	30.0	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-09-7	Potassium	80.0	ug/L	U	80.0	300	300	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-23-5	Sodium	80.0	ug/L	U	80.0	250	250	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:20	210429-2	2114317
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/29/21 11:20	210429-2	2114317
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:53	210428-1	2114317
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 07:53	210428-1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451019 **BASIS:** As Received **DATE COLLECTED** 07-APR-21

CLIENT ID: HA20-CMT-1I-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-39-3	Barium	27.8	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-70-2	Calcium	32400	ug/L		80.0	200	200	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-48-4	Cobalt	0.618	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7439-95-4	Magnesium	8700	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7439-96-5	Manganese	52.6	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7439-98-7	Molybdenum	0.656	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-02-0	Nickel	3.70	ug/L		0.600	2.00	2.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-09-7	Potassium	4600	ug/L		80.0	300	300	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-23-5	Sodium	25900	ug/L		80.0	250	250	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:22	210429-2	2114317
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/29/21 11:22	210429-2	2114317
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 08:04	210428-1	2114317
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 08:04	210428-1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540451 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540451020 **BASIS:** Filtered **DATE COLLECTED** 07−APR−21

CLIENT ID: HA20−CMT−1I−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−39−3	Barium	28.3	ug/L		0.670	4.00	4.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−70−2	Calcium	32600	ug/L		80.0	200	200	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−48−4	Cobalt	0.638	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−50−8	Copper	0.464	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7439−95−4	Magnesium	8650	ug/L		10.0	30.0	30.0	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7439−96−5	Manganese	53.6	ug/L		1.00	5.00	5.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7439−98−7	Molybdenum	0.705	ug/L	J	0.200	1.00	1.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−02−0	Nickel	3.98	ug/L		0.600	2.00	2.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−09−7	Potassium	4650	ug/L		80.0	300	300	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−23−5	Sodium	26100	ug/L		80.0	250	250	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/05/21 14:18		2123947
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/29/21 11:23	210429−2	2114317
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/29/21 11:23	210429−2	2114317
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 08:00	210428−1	2114317
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/29/21 08:00	210428−1	2114317

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114317	2114315	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5160	ug/L	5050	ug/L	102.2	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Arsenic	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Barium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Beryllium	52.4	ug/L	50	ug/L	104.8	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Cadmium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Calcium	5130	ug/L	5000	ug/L	102.5	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Chromium	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Cobalt	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Copper	52.5	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Iron	5150	ug/L	5000	ug/L	103	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Lead	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Magnesium	5180	ug/L	5000	ug/L	103.7	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Manganese	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Molybdenum	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Nickel	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Potassium	5290	ug/L	5000	ug/L	105.8	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Selenium	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Silver	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Sodium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Thallium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Thorium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Vanadium	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Zinc	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	29−APR−21 04:10	210428−1
	Uranium−235	0.36	ug/L	0.36	ug/L	100.1	90.0 − 110.0	MS	29−APR−21 09:46	210429−2
	Uranium−238	49.3	ug/L	49.64	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 09:46	210429−2
	Sodium	5240	ug/L	5000	ug/L	104.7	90.0 − 110.0	MS	29−APR−21 11:40	210429−3
CCV01										
	Aluminum	5150	ug/L	5050	ug/L	101.9	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Antimony	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Arsenic	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 04:28	210428−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Beryllium	52.4	ug/L	50	ug/L	104.8	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Cadmium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Calcium	5100	ug/L	5000	ug/L	102.1	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Chromium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Cobalt	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Copper	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Iron	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Lead	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Manganese	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Molybdenum	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Nickel	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Potassium	5320	ug/L	5000	ug/L	106.4	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Selenium	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Silver	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Sodium	5230	ug/L	5000	ug/L	104.5	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Thallium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Thorium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Vanadium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Zinc	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	29−APR−21 04:28	210428−1
	Uranium−235	0.36	ug/L	0.36	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 09:54	210429−2
	Uranium−238	49.6	ug/L	49.64	ug/L	100	90.0 − 110.0	MS	29−APR−21 09:54	210429−2
	Sodium	5180	ug/L	5000	ug/L	103.7	90.0 − 110.0	MS	29−APR−21 11:49	210429−3
CCV02										
	Aluminum	5110	ug/L	5050	ug/L	101.1	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Antimony	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Arsenic	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Barium	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Beryllium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Cadmium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	29−APR−21 04:39	210428−1

METALS
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Initial and Continuing Calibration Verification

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Calcium	5100	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Chromium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Cobalt	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Copper	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Iron	5020	ug/L	5000	ug/L	100.5	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Lead	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Magnesium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Manganese	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Molybdenum	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Nickel	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Potassium	5280	ug/L	5000	ug/L	105.5	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Selenium	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Silver	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Sodium	5190	ug/L	5000	ug/L	103.7	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Thallium	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Thorium	54.7	ug/L	50	ug/L	109.5	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Vanadium	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Zinc	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	29−APR−21 04:39	210428−1
	Uranium−235	0.36	ug/L	0.36	ug/L	99.2	90.0 − 110.0	MS	29−APR−21 10:21	210429−2
	Uranium−238	49.3	ug/L	49.64	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 10:21	210429−2
	Sodium	5180	ug/L	5000	ug/L	103.6	90.0 − 110.0	MS	29−APR−21 12:00	210429−3
CCV03										
	Aluminum	5120	ug/L	5050	ug/L	101.3	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Antimony	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Arsenic	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Barium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Beryllium	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Cadmium	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Calcium	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Chromium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Cobalt	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	29−APR−21 06:10	210428−1

METALS
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Initial and Continuing Calibration Verification

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Copper	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Iron	5040	ug/L	5000	ug/L	100.8	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Lead	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Magnesium	5140	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Manganese	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Molybdenum	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Nickel	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Potassium	5250	ug/L	5000	ug/L	105.1	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Selenium	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Silver	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Sodium	5230	ug/L	5000	ug/L	104.5	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Thallium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Thorium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Vanadium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Zinc	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	29−APR−21 06:10	210428−1
	Uranium−235	0.36	ug/L	0.36	ug/L	100.6	90.0 − 110.0	MS	29−APR−21 10:37	210429−2
	Uranium−238	50	ug/L	49.64	ug/L	100.8	90.0 − 110.0	MS	29−APR−21 10:37	210429−2
CCV04										
	Aluminum	5140	ug/L	5050	ug/L	101.9	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Antimony	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Arsenic	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Barium	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Beryllium	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Cadmium	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Chromium	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Cobalt	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Copper	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Iron	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Magnesium	5180	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	29−APR−21 06:42	210428−1

METALS
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Initial and Continuing Calibration Verification

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Manganese	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Molybdenum	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Nickel	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Potassium	5260	ug/L	5000	ug/L	105.2	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Selenium	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Silver	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Sodium	5190	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Thallium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Thorium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Vanadium	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Zinc	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	29−APR−21 06:42	210428−1
	Uranium−235	0.36	ug/L	0.36	ug/L	98.9	90.0 − 110.0	MS	29−APR−21 10:53	210429−2
	Uranium−238	49.5	ug/L	49.64	ug/L	99.7	90.0 − 110.0	MS	29−APR−21 10:53	210429−2
CCV05										
	Aluminum	5090	ug/L	5050	ug/L	100.8	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Antimony	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Arsenic	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Barium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Beryllium	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Cadmium	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Calcium	4960	ug/L	5000	ug/L	99.1	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Chromium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Cobalt	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Copper	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Iron	4950	ug/L	5000	ug/L	98.9	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Lead	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Magnesium	5130	ug/L	5000	ug/L	102.6	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Manganese	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Molybdenum	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Nickel	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Potassium	5200	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	29−APR−21 07:24	210428−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Selenium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Silver	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Sodium	5150	ug/L	5000	ug/L	103	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Thallium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Thorium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Vanadium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Zinc	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	29−APR−21 07:24	210428−1
	Uranium−235	0.36	ug/L	0.36	ug/L	100.5	90.0 − 110.0	MS	29−APR−21 11:11	210429−2
	Uranium−238	49.7	ug/L	49.64	ug/L	100.1	90.0 − 110.0	MS	29−APR−21 11:11	210429−2
CCV06										
	Aluminum	5020	ug/L	5050	ug/L	99.3	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Antimony	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Arsenic	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Barium	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Beryllium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Cadmium	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Calcium	4920	ug/L	5000	ug/L	98.5	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Chromium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Cobalt	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Copper	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Iron	4920	ug/L	5000	ug/L	98.4	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Lead	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Manganese	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Molybdenum	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Nickel	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Potassium	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Selenium	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Silver	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Sodium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Thallium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	29−APR−21 08:07	210428−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thorium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Vanadium	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Zinc	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	29−APR−21 08:07	210428−1
	Uranium−235	0.37	ug/L	0.36	ug/L	102	90.0 − 110.0	MS	29−APR−21 11:25	210429−2
	Uranium−238	49.6	ug/L	49.64	ug/L	99.9	90.0 − 110.0	MS	29−APR−21 11:25	210429−2

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Aluminum	53.4	ug/L	50	ug/L	106.8	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Antimony	2.85	ug/L	3	ug/L	94.8	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Arsenic	5.01	ug/L	5	ug/L	100.2	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Barium	4.05	ug/L	4	ug/L	101.2	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Beryllium	.484	ug/L	.5	ug/L	96.8	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Cadmium	1.01	ug/L	1	ug/L	100.8	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Calcium	245	ug/L	200	ug/L	122.5	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Chromium	10.3	ug/L	10	ug/L	102.5	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Cobalt	1.05	ug/L	1	ug/L	104.9	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Copper	2.13	ug/L	2	ug/L	106.4	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Iron	106	ug/L	100	ug/L	105.8	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Lead	2.15	ug/L	2	ug/L	107.5	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Magnesium	31.8	ug/L	30	ug/L	106.1	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Manganese	5.11	ug/L	5	ug/L	102.3	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Molybdenum	1.08	ug/L	1	ug/L	107.7	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Nickel	2.08	ug/L	2	ug/L	103.9	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Potassium	324	ug/L	300	ug/L	107.8	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Selenium	5.29	ug/L	5	ug/L	105.7	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Silver	1.06	ug/L	1	ug/L	105.6	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Sodium	264	ug/L	250	ug/L	105.8	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Thallium	1.99	ug/L	2	ug/L	99.7	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Thorium	2.22	ug/L	2	ug/L	111.2	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Vanadium	20.2	ug/L	20	ug/L	100.9	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Zinc	21.2	ug/L	20	ug/L	105.9	80.0 − 120.0	MS	29−APR−21 04:17	210428−1
	Uranium−235	.0016	ug/L	.0014	ug/L	114.3	80.0 − 120.0	MS	29−APR−21 09:49	210429−2
	Uranium−238	.2	ug/L	.2	ug/L	100.1	80.0 − 120.0	MS	29−APR−21 09:49	210429−2
	Sodium	278	ug/L	250	ug/L	111.1	80.0 − 120.0	MS	29−APR−21 11:43	210429−3

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540451

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	29−APR−21 04:14	210428−1
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	29−APR−21 04:14	210428−1
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	29−APR−21 04:14	210428−1
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	29−APR−21 04:14	210428−1
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	29−APR−21 04:14	210428−1
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	29−APR−21 04:14	210428−1
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	29−APR−21 04:14	210428−1
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	29−APR−21 04:14	210428−1
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	29−APR−21 04:14	210428−1
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	29−APR−21 04:14	210428−1
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	29−APR−21 04:14	210428−1
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	29−APR−21 04:14	210428−1
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	29−APR−21 04:14	210428−1
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	29−APR−21 04:14	210428−1
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	29−APR−21 04:14	210428−1
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	29−APR−21 04:14	210428−1
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	29−APR−21 04:14	210428−1
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	29−APR−21 04:14	210428−1
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	29−APR−21 04:14	210428−1
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	29−APR−21 04:14	210428−1
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	29−APR−21 04:14	210428−1
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	29−APR−21 04:14	210428−1
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	29−APR−21 04:14	210428−1
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	29−APR−21 04:14	210428−1
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	29−APR−21 09:47	210429−2
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	29−APR−21 09:47	210429−2
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	29−APR−21 11:42	210429−3
CCB01										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	29−APR−21 04:31	210428−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	29−APR−21 04:31	210428−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 04:31	210428−1

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540451

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	29−APR−21 04:31	210428−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	29−APR−21 04:31	210428−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 04:31	210428−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	29−APR−21 04:31	210428−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	29−APR−21 04:31	210428−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 04:31	210428−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	29−APR−21 04:31	210428−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	29−APR−21 04:31	210428−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	29−APR−21 04:31	210428−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	29−APR−21 04:31	210428−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	29−APR−21 04:31	210428−1
	Molybdenum	0.817	+/−1	J	0.2	1.0	LIQ	MS	29−APR−21 04:31	210428−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 04:31	210428−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 04:31	210428−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 04:31	210428−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 04:31	210428−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	29−APR−21 04:31	210428−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 04:31	210428−1
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	29−APR−21 04:31	210428−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 04:31	210428−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 04:31	210428−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	29−APR−21 09:56	210429−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	29−APR−21 09:56	210429−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	29−APR−21 11:51	210429−3
CCB02										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	29−APR−21 04:42	210428−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	29−APR−21 04:42	210428−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 04:42	210428−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	29−APR−21 04:42	210428−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	29−APR−21 04:42	210428−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 04:42	210428−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540451

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	29−APR−21 04:42	210428−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	29−APR−21 04:42	210428−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 04:42	210428−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	29−APR−21 04:42	210428−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	29−APR−21 04:42	210428−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	29−APR−21 04:42	210428−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	29−APR−21 04:42	210428−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	29−APR−21 04:42	210428−1
	Molybdenum	0.628	+/−1	J	0.2	1.0	LIQ	MS	29−APR−21 04:42	210428−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 04:42	210428−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 04:42	210428−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 04:42	210428−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 04:42	210428−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	29−APR−21 04:42	210428−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 04:42	210428−1
	Thorium	1.15	+/−2	J	0.7	2.0	LIQ	MS	29−APR−21 04:42	210428−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 04:42	210428−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 04:42	210428−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	29−APR−21 10:23	210429−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	29−APR−21 10:23	210429−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	29−APR−21 12:02	210429−3
CCB03										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	29−APR−21 06:14	210428−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	29−APR−21 06:14	210428−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 06:14	210428−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	29−APR−21 06:14	210428−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	29−APR−21 06:14	210428−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 06:14	210428−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	29−APR−21 06:14	210428−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	29−APR−21 06:14	210428−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 06:14	210428−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540451

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	29−APR−21 06:14	210428−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	29−APR−21 06:14	210428−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	29−APR−21 06:14	210428−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	29−APR−21 06:14	210428−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	29−APR−21 06:14	210428−1
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	29−APR−21 06:14	210428−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 06:14	210428−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 06:14	210428−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 06:14	210428−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 06:14	210428−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	29−APR−21 06:14	210428−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 06:14	210428−1
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	29−APR−21 06:14	210428−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 06:14	210428−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 06:14	210428−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	29−APR−21 10:39	210429−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	29−APR−21 10:39	210429−2
CCB04										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	29−APR−21 06:46	210428−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	29−APR−21 06:46	210428−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 06:46	210428−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	29−APR−21 06:46	210428−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	29−APR−21 06:46	210428−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 06:46	210428−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	29−APR−21 06:46	210428−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	29−APR−21 06:46	210428−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 06:46	210428−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	29−APR−21 06:46	210428−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	29−APR−21 06:46	210428−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	29−APR−21 06:46	210428−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	29−APR−21 06:46	210428−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540451

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	29−APR−21 06:46	210428−1
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	29−APR−21 06:46	210428−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 06:46	210428−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 06:46	210428−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 06:46	210428−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 06:46	210428−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	29−APR−21 06:46	210428−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 06:46	210428−1
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	29−APR−21 06:46	210428−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 06:46	210428−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 06:46	210428−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	29−APR−21 10:55	210429−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	29−APR−21 10:55	210429−2
CCB05										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	29−APR−21 07:28	210428−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	29−APR−21 07:28	210428−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 07:28	210428−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	29−APR−21 07:28	210428−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	29−APR−21 07:28	210428−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 07:28	210428−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	29−APR−21 07:28	210428−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	29−APR−21 07:28	210428−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 07:28	210428−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	29−APR−21 07:28	210428−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	29−APR−21 07:28	210428−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	29−APR−21 07:28	210428−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	29−APR−21 07:28	210428−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	29−APR−21 07:28	210428−1
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	29−APR−21 07:28	210428−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 07:28	210428−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 07:28	210428−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540451

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 07:28	210428−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 07:28	210428−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	29−APR−21 07:28	210428−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 07:28	210428−1
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	29−APR−21 07:28	210428−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 07:28	210428−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 07:28	210428−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	29−APR−21 11:13	210429−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	29−APR−21 11:13	210429−2
CCB06										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	29−APR−21 08:11	210428−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	29−APR−21 08:11	210428−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 08:11	210428−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	29−APR−21 08:11	210428−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	29−APR−21 08:11	210428−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 08:11	210428−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	29−APR−21 08:11	210428−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	29−APR−21 08:11	210428−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 08:11	210428−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	29−APR−21 08:11	210428−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	29−APR−21 08:11	210428−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	29−APR−21 08:11	210428−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	29−APR−21 08:11	210428−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	29−APR−21 08:11	210428−1
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	29−APR−21 08:11	210428−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 08:11	210428−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	29−APR−21 08:11	210428−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	29−APR−21 08:11	210428−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	29−APR−21 08:11	210428−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	29−APR−21 08:11	210428−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	29−APR−21 08:11	210428−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540451

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	29−APR−21 08:11	210428−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 08:11	210428−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	29−APR−21 08:11	210428−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	29−APR−21 11:27	210429−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	29−APR−21 11:27	210429−2

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 540451

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204793781								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	94300	ug/L	100000	ug/L	94.3	80.0 − 120.0	29−APR−21 04:21	210428−1
	Antimony	0.044	ug/L					29−APR−21 04:21	210428−1
	Arsenic	0.121	ug/L					29−APR−21 04:21	210428−1
	Barium	2.54	ug/L					29−APR−21 04:21	210428−1
	Beryllium	0.008	ug/L					29−APR−21 04:21	210428−1
	Cadmium	0.826	ug/L					29−APR−21 04:21	210428−1
	Calcium	95600	ug/L	100000	ug/L	95.6	80.0 − 120.0	29−APR−21 04:21	210428−1
	Chromium	0.834	ug/L					29−APR−21 04:21	210428−1
	Cobalt	0.467	ug/L					29−APR−21 04:21	210428−1
	Copper	0.179	ug/L					29−APR−21 04:21	210428−1
	Iron	83600	ug/L	100000	ug/L	83.6	80.0 − 120.0	29−APR−21 04:21	210428−1
	Lead	0.222	ug/L					29−APR−21 04:21	210428−1
	Magnesium	91800	ug/L	100000	ug/L	91.8	80.0 − 120.0	29−APR−21 04:21	210428−1
	Manganese	5.98	ug/L					29−APR−21 04:21	210428−1
	Molybdenum	2110	ug/L	2000	ug/L	106	80.0 − 120.0	29−APR−21 04:21	210428−1
	Nickel	0.427	ug/L					29−APR−21 04:21	210428−1
	Potassium	99400	ug/L	100000	ug/L	99.4	80.0 − 120.0	29−APR−21 04:21	210428−1
	Selenium	0.258	ug/L					29−APR−21 04:21	210428−1
	Silver	0.134	ug/L					29−APR−21 04:21	210428−1
	Sodium	99900	ug/L	100000	ug/L	99.9	80.0 − 120.0	29−APR−21 04:21	210428−1
	Thallium	0.072	ug/L					29−APR−21 04:21	210428−1
	Thorium	2.23	ug/L					29−APR−21 04:21	210428−1
	Vanadium	0.039	ug/L					29−APR−21 04:21	210428−1
	Zinc	4.44	ug/L					29−APR−21 04:21	210428−1
ICSAB01									
	Aluminum	93200	ug/L	100000	ug/L	93.2	80.0 − 120.0	29−APR−21 04:24	210428−1
	Antimony	19.7	ug/L	20	ug/L	98.4	80.0 − 120.0	29−APR−21 04:24	210428−1
	Arsenic	20.8	ug/L	20	ug/L	104	80.0 − 120.0	29−APR−21 04:24	210428−1
	Barium	22.0	ug/L	22.35	ug/L	98.6	80.0 − 120.0	29−APR−21 04:24	210428−1
	Beryllium	18.7	ug/L	20	ug/L	93.5	80.0 − 120.0	29−APR−21 04:24	210428−1

METALS
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Interference Check Sample

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cadmium	19.9	ug/L	20.72	ug/L	96.2	80.0 − 120.0	29−APR−21 04:24	210428−1
	Calcium	93600	ug/L	100000	ug/L	93.6	80.0 − 120.0	29−APR−21 04:24	210428−1
	Chromium	20.3	ug/L	20	ug/L	101	80.0 − 120.0	29−APR−21 04:24	210428−1
	Cobalt	19.5	ug/L	20.65	ug/L	94.5	80.0 − 120.0	29−APR−21 04:24	210428−1
	Copper	17.3	ug/L	20	ug/L	86.6	80.0 − 120.0	29−APR−21 04:24	210428−1
	Iron	82600	ug/L	100000	ug/L	82.6	80.0 − 120.0	29−APR−21 04:24	210428−1
	Lead	19.0	ug/L	20	ug/L	95.2	80.0 − 120.0	29−APR−21 04:24	210428−1
	Magnesium	90300	ug/L	100000	ug/L	90.3	80.0 − 120.0	29−APR−21 04:24	210428−1
	Manganese	25.0	ug/L	25.72	ug/L	97	80.0 − 120.0	29−APR−21 04:24	210428−1
	Molybdenum	2080	ug/L	2000	ug/L	104	80.0 − 120.0	29−APR−21 04:24	210428−1
	Nickel	18.6	ug/L	20	ug/L	93	80.0 − 120.0	29−APR−21 04:24	210428−1
	Potassium	98400	ug/L	100000	ug/L	98.4	80.0 − 120.0	29−APR−21 04:24	210428−1
	Selenium	21.1	ug/L	20	ug/L	106	80.0 − 120.0	29−APR−21 04:24	210428−1
	Silver	18.4	ug/L	20	ug/L	91.8	80.0 − 120.0	29−APR−21 04:24	210428−1
	Sodium	99200	ug/L	100000	ug/L	99.2	80.0 − 120.0	29−APR−21 04:24	210428−1
	Thallium	18.1	ug/L	20	ug/L	90.3	80.0 − 120.0	29−APR−21 04:24	210428−1
	Thorium	21.4	ug/L	20	ug/L	107	80.0 − 120.0	29−APR−21 04:24	210428−1
	Vanadium	19.9	ug/L	20	ug/L	99.7	80.0 − 120.0	29−APR−21 04:24	210428−1
	Zinc	20.6	ug/L	20	ug/L	103	80.0 − 120.0	29−APR−21 04:24	210428−1

METALS
−4−
Interference Check Sample

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					29−APR−21 09:51	210429−2
	Uranium−238	0.023	ug/L					29−APR−21 09:51	210429−2
ICSAB01									
	Uranium−235	0.142	ug/L	.145	ug/L	97.9	80.0 − 120.0	29−APR−21 09:53	210429−2
	Uranium−238	19.1	ug/L	19.86	ug/L	96.2	80.0 − 120.0	29−APR−21 09:53	210429−2

METALS
−4−
Interference Check Sample

SDG No: 540451

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Sodium	98700	ug/L	100000	ug/L	98.7	80.0 − 120.0	29−APR−21 11:45	210429−3
ICSAB01									
	Sodium	99300	ug/L	100000	ug/L	99.3	80.0 − 120.0	29−APR−21 11:47	210429−3

METALS
−5a−

Matrix Spike Summary

SDG NO. 540451 **Client ID** MW−BS17−04072021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540451001 **Spike ID:** 1204793783

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Barium	ug/L	75−125	77.9		29.0		50.0	97.9		MS
Beryllium	ug/L	75−125	56.1		0.200	U	50.0	112		MS
Cadmium	ug/L	75−125	50.0		0.300	U	50.0	99.7		MS
Calcium	ug/L		23500		21400		2000	106	N/A	MS
Chromium	ug/L	75−125	47.7		3.00	U	50.0	95		MS
Cobalt	ug/L	75−125	48.8		1.13		50.0	95.4		MS
Copper	ug/L	75−125	48.0		0.300	U	50.0	95.7		MS
Iron	ug/L	75−125	2650		766		2000	94.4		MS
Lead	ug/L	75−125	48.1		0.500	U	50.0	96		MS
Magnesium	ug/L	75−125	7680		5730		2000	97.2		MS
Manganese	ug/L		735		689		50.0	91.5	N/A	MS
Molybdenum	ug/L	75−125	53.0		1.19		50.0	104		MS
Nickel	ug/L	75−125	48.2		0.713	J	50.0	94.9		MS
Potassium	ug/L	75−125	5420		3400		2000	101		MS
Selenium	ug/L	75−125	50.2		2.00	U	50.0	100		MS
Silver	ug/L	75−125	50.5		0.300	U	50.0	101		MS
Sodium	ug/L		12700		10900		2000	93.3	N/A	MS
Thallium	ug/L	75−125	46.3		0.600	U	50.0	92.5		MS
Thorium	ug/L	75−125	46.6		0.700	U	50.0	92.8		MS
Uranium−235	ug/L	75−125	0.356		0.0100	U	0.360	97.3		MS
Uranium−238	ug/L	75−125	49.5		0.856		49.6	98		MS
Vanadium	ug/L	75−125	50.6		3.30	U	50.0	96		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 540451 **Client ID** MW−BS17−04072021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540451001 **Spike ID:** 1204793783

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Zinc	ug/L	75−125	50.5		3.30	U	50.0	94.4		MS
Arsenic	ug/L	75−125	54.1		5.45		50.0	97.3		MS
Aluminum	ug/L	75−125	1980		19.3	U	2000	97.9		MS
Antimony	ug/L	75−125	49.6		1.00	U	50.0	97.3		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO. 540451 **Client ID** MW-BS17-04072021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540451001 **Spike ID:** 1204793784

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75-125	2010		19.3	U	2000	99.8		MS
Antimony	ug/L	75-125	50.5		1.00	U	50.0	99.1		MS
Arsenic	ug/L	75-125	54.2		5.45		50.0	97.5		MS
Barium	ug/L	75-125	76.8		29.0		50.0	95.7		MS
Beryllium	ug/L	75-125	56.5		0.200	U	50.0	113		MS
Cadmium	ug/L	75-125	49.4		0.300	U	50.0	98.6		MS
Calcium	ug/L		23800		21400		2000	121	N/A	MS
Chromium	ug/L	75-125	49.0		3.00	U	50.0	97.6		MS
Cobalt	ug/L	75-125	49.2		1.13		50.0	96.2		MS
Copper	ug/L	75-125	48.3		0.300	U	50.0	96.3		MS
Iron	ug/L	75-125	2700		766		2000	96.5		MS
Lead	ug/L	75-125	48.6		0.500	U	50.0	97.1		MS
Magnesium	ug/L	75-125	7740		5730		2000	100		MS
Manganese	ug/L		754		689		50.0	129	N/A	MS
Molybdenum	ug/L	75-125	54.1		1.19		50.0	106		MS
Nickel	ug/L	75-125	48.6		0.713	J	50.0	95.7		MS
Potassium	ug/L	75-125	5460		3400		2000	103		MS
Selenium	ug/L	75-125	49.3		2.00	U	50.0	98.3		MS
Silver	ug/L	75-125	50.8		0.300	U	50.0	102		MS
Sodium	ug/L		13000		10900		2000	108	N/A	MS
Thallium	ug/L	75-125	47.2		0.600	U	50.0	94.4		MS
Thorium	ug/L	75-125	47.7		0.700	U	50.0	95		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 540451 **Client ID:** MW−BS17−04072021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540451001 **Spike ID:** 1204793784

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.361		0.0100	U	0.360	98.7		MS
Uranium−238	ug/L	75−125	50.0		0.856		49.6	98.9		MS
Vanadium	ug/L	75−125	51.3		3.30	U	50.0	97.3		MS
Zinc	ug/L	75−125	51.0		3.30	U	50.0	95.4		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 540451 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−BS17−04072021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793783 **Duplicate ID:** 1204793784 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1980		2010		1.86		MS
Antimony	ug/L	+/−20	49.6		50.5		1.82		MS
Arsenic	ug/L	+/−20	54.1		54.2		.207		MS
Barium	ug/L	+/−20	77.9		76.8		1.44		MS
Beryllium	ug/L	+/−20	56.1		56.5		.771		MS
Cadmium	ug/L	+/−20	50.0		49.4		1.13		MS
Calcium	ug/L	+/−20	23500		23800		1.31		MS
Chromium	ug/L	+/−20	47.7		49.0		2.69		MS
Cobalt	ug/L	+/−20	48.8		49.2		.84		MS
Copper	ug/L	+/−20	48.0		48.3		.583		MS
Iron	ug/L	+/−20	2650		2700		1.56		MS
Lead	ug/L	+/−20	48.1		48.6		1.07		MS
Magnesium	ug/L	+/−20	7680		7740		.775		MS
Manganese	ug/L	+/−20	735		754		2.53		MS
Molybdenum	ug/L	+/−20	53.0		54.1		2.1		MS
Nickel	ug/L	+/−20	48.2		48.6		.821		MS
Potassium	ug/L	+/−20	5420		5460		.758		MS
Selenium	ug/L	+/−20	50.2		49.3		1.95		MS
Silver	ug/L	+/−20	50.5		50.8		.649		MS
Sodium	ug/L	+/−20	12700		13000		2.24		MS
Thallium	ug/L	+/−20	46.3		47.2		2.05		MS
Thorium	ug/L	+/−20	46.6		47.7		2.36		MS
Uranium−235	ug/L	+/−20	0.356		0.361		1.42		MS
Uranium−238	ug/L	+/−20	49.5		50.0		.912		MS
Vanadium	ug/L	+/−20	50.6		51.3		1.31		MS
Zinc	ug/L	+/−20	50.5		51.0		.925		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 540451 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−BS17−04072021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793783 **Duplicate ID:** 1204793784 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
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Laboratory Control Sample Summary

SDG NO. 540451

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204793782								
	Aluminum	ug/L	2000	1950		97.7	80−120	MS
	Antimony	ug/L	50.0	46.7		93.4	80−120	MS
	Arsenic	ug/L	50.0	46.1		92.2	80−120	MS
	Barium	ug/L	50.0	48.4		96.8	80−120	MS
	Beryllium	ug/L	50.0	52.5		105	80−120	MS
	Cadmium	ug/L	50.0	48.1		96.1	80−120	MS
	Calcium	ug/L	2000	2050		103	80−120	MS
	Chromium	ug/L	50.0	47.6		95.2	80−120	MS
	Cobalt	ug/L	50.0	47.7		95.4	80−120	MS
	Copper	ug/L	50.0	48.7		97.3	80−120	MS
	Iron	ug/L	2000	1890		94.7	80−120	MS
	Lead	ug/L	50.0	49.9		99.8	80−120	MS
	Magnesium	ug/L	2000	2000		100	80−120	MS
	Manganese	ug/L	50.0	47.3		94.6	80−120	MS
	Molybdenum	ug/L	50.0	48.6		97.2	80−120	MS
	Nickel	ug/L	50.0	47.6		95.2	80−120	MS
	Potassium	ug/L	2000	2030		101	80−120	MS
	Selenium	ug/L	50.0	47.9		95.7	80−120	MS
	Silver	ug/L	50.0	49.1		98.2	80−120	MS
	Sodium	ug/L	2000	2080		104	80−120	MS
	Thallium	ug/L	50.0	47.2		94.4	80−120	MS
	Thorium	ug/L	50.0	48.2		96.4	80−120	MS
	Uranium−235	ug/L	0.360	0.342		94.9	80−120	MS
	Uranium−238	ug/L	49.6	47.6		95.9	80−120	MS
	Vanadium	ug/L	50.0	47.9		95.8	80−120	MS
	Zinc	ug/L	50.0	48.3		96.5	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 540451 **Client ID** MW−BS17−04072021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540451001 **Serial Dilution ID:** 1204793785

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	5.45		10	U	3.264			MS
Barium	29		28		3.367			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	21400		21000		1.743		20	MS
Chromium	3	U	15	U				MS
Cobalt	1.13		1.5	U	4.444			MS
Copper	.3	U	1.5	U				MS
Iron	766		756		1.418			MS
Lead	.5	U	2.5	U				MS
Magnesium	5730		5540		3.412		20	MS
Manganese	689		698		1.269		20	MS
Molybdenum	1.19		1.58	J	32.687			MS
Nickel	.713	J	3	U	3.086			MS
Potassium	3400		3240		4.713			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	10900		10500		3.708		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.856		.922	J	7.602			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	16.5	U				MS

SW846

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 540451 **Client ID** MW−BS17−04072021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540451001 **Serial Dilution ID:** 1204793785

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 540451 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2114315							
1204793781	MB for batch 2114315	MB	G	13−APR−21	50mL	50mL	
1204793782	LCS for batch 2114315	LCS	G	13−APR−21	50mL	50mL	
1204793783	MW−BS17−04072021S	MS	G	13−APR−21	50mL	50mL	
1204793784	MW−BS17−04072021SD	MSD	G	13−APR−21	50mL	50mL	
540451001	MW−BS17−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451002	MW−BS17−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451003	MW−SD62A−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451004	MW−SD62A−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451005	HB−11−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451006	HB−11−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451007	HA20−CMT−1S−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451008	HA20−CMT−1S−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451009	MW−BS39−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451010	MW−BS39−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451011	MW−S14−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451012	MW−S14−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451013	MW−SD63−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451014	MW−SD63−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451015	MW−BS12−04072021	SAMPLE	G	13−APR−21	50mL	50mL	

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 540451 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
540451016	MW−BS12−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451017	EQ Blank1−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451018	EQ Blank1−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451019	HA20−CMT−1I−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540451020	HA20−CMT−1I−04072021	SAMPLE	G	13−APR−21	50mL	50mL	

SW846

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL | **Client Sdg:** 540451

Inst Name: ICPMS15 | **Instrument Type:** MS

Start Date: 29-APR-21 | **End Date:** 29-APR-21 | **Data File:** 210428-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	04:00:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	04:03:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	04:07:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	04:10:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	04:14:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	04:17:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	04:21:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	04:24:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	04:28:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	04:31:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	04:35:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	04:39:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	04:42:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	04:46:08																										
ZZZZZZ	1	04:49:40																										
CCV	1	04:53:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	04:56:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	05:00:16																										
ZZZZZZ	1	05:03:48																										
ZZZZZZ	1	05:07:19																										
ZZZZZZ	1	05:10:51																										
ZZZZZZ	5	05:14:22																										
ZZZZZZ	1	05:17:53																										
ZZZZZZ	1	05:21:23																										
ZZZZZZ	1	05:24:54																										
ZZZZZZ	1	05:28:25																										
ZZZZZZ	5	05:31:57																										
CCV	1	05:35:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	05:39:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	05:42:34																										
ZZZZZZ	1	05:46:06																										
ZZZZZZ	1	05:49:37																										
ZZZZZZ	1	05:53:09																										
ZZZZZZ	1	05:56:41																										
ZZZZZZ	1	06:00:13																										
ZZZZZZ	1	06:03:44																										
ZZZZZZ	1	06:07:16																										
CCV03	1	06:10:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	06:14:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793781	1	06:17:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793782	1	06:21:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540451

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 29-APR-21 **End Date:** 29-APR-21 **Data File:** 210428-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
540451001	1	06:24:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793783	1	06:28:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793784	1	06:32:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	06:35:32																										
1204793785	5	06:39:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	06:42:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	06:46:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451002	1	06:49:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451003	1	06:53:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451004	1	06:56:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451005	1	07:00:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451006	1	07:03:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451007	1	07:07:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451008	1	07:10:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451009	1	07:14:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X
540451010	1	07:17:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X
540451011	1	07:21:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV05	1	07:24:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	07:28:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451012	1	07:32:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451013	1	07:35:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451014	1	07:39:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451015	1	07:42:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451016	1	07:46:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451017	1	07:49:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451018	1	07:53:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	07:56:39																										
540451020	1	08:00:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540451019	1	08:04:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV06	1	08:07:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB06	1	08:11:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540451

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 29-APR-21 **End Date:** 29-APR-21 **Data File:** 210429-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	09:40:41																							X	X		
S10	1	09:42:27																							X	X		
S100	1	09:44:14																							X	X		
ICV01	1	09:46:01																							X	X		
ICB01	1	09:47:49																							X	X		
CRDL01	1	09:49:37																							X	X		
ICSA01	1	09:51:24																							X	X		
ICSAB01	1	09:53:12																							X	X		
CCV01	1	09:54:59																							X	X		
CCB01	1	09:56:46																							X	X		
ZZZZZZ	1	09:58:33																										
ZZZZZZ	1	10:00:19																										
ZZZZZZ	2	10:02:06																										
ZZZZZZ	10	10:03:53																										
ZZZZZZ	2	10:05:40																										
ZZZZZZ	10	10:07:27																										
CCV	1	10:09:14																							X	X		
CCB	1	10:11:02																							X	X		
ZZZZZZ	2	10:14:24																										
ZZZZZZ	10	10:16:11																										
ZZZZZZ	2	10:17:56																										
ZZZZZZ	10	10:19:43																										
CCV02	1	10:21:30																							X	X		
CCB02	1	10:23:18																							X	X		
1204793781	1	10:25:05																							X	X		
1204793782	1	10:26:52																							X	X		
540451001	1	10:28:39																							X	X		
1204793783	1	10:30:25																							X	X		
1204793784	1	10:32:12																							X	X		
ZZZZZZ	1	10:33:59																										
1204793785	5	10:35:45																							X	X		
CCV03	1	10:37:32																							X	X		
CCB03	1	10:39:20																							X	X		
540451002	1	10:41:07																							X	X		
540451003	1	10:42:54																							X	X		
540451004	1	10:44:41																							X	X		
540451005	1	10:46:28																							X	X		
540451006	1	10:48:14																							X	X		
540451007	1	10:50:01																							X	X		
540451008	1	10:51:48																							X	X		
CCV04	1	10:53:36																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540451

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 29-APR-21

End Date: 29-APR-21

Data File: 210429-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB04	1	10:55:24																							X	X		
540451009	1	10:57:11																							X	X		
540451010	1	10:58:58																							X	X		
540451011	1	11:00:44																							X	X		
540451012	1	11:02:31																							X	X		
540451013	1	11:04:18																							X			
540451013	2	11:06:05																								X		
540451014	1	11:07:52																							X			
540451014	2	11:09:39																								X		
CCV05	1	11:11:26																							X	X		
CCB05	1	11:13:14																							X	X		
540451015	1	11:15:01																							X	X		
540451016	1	11:16:48																							X	X		
540451017	1	11:18:35																							X	X		
540451018	1	11:20:21																							X	X		
540451019	1	11:22:08																							X	X		
540451020	1	11:23:55																							X	X		
CCV06	1	11:25:42																							X	X		
CCB06	1	11:27:29																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540451

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 29-APR-21 **End Date:** 29-APR-21 **Data File:** 210429-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	11:34:39																				X						
S10	1	11:36:31																				X						
S100	1	11:38:23																				X						
ICV01	1	11:40:14																				X						
ICB01	1	11:42:06																				X						
CRDL01	1	11:43:58																				X						
ICSA01	1	11:45:50																				X						
ICSAB01	1	11:47:41																				X						
CCV01	1	11:49:33																				X						
CCB01	1	11:51:25																				X						
ZZZZZZ	1	11:53:18																										
ZZZZZZ	1	11:55:09																										
540451009	10	11:57:01																				X						
540451010	10	11:58:53																				X						
CCV02	1	12:00:46																				X						
CCB02	1	12:02:38																				X						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 540451

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 540451

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: 2114315
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204793782	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204793782	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204793783	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204793783	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204793784	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204793784	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204793781 MB	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793782 LCS	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451001	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793785 SDILT (540451001)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793783 MS (540451001)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793784 MSD (540451001)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451002	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451003	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451004	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451005	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451006	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451007	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451008	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451009	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451010	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451011	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451012	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451013	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451014	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451015	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451016	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451017	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451018	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451019	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540451020	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3265774	HYDROCHLORIC ACID	2.5 mL
3279375	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 92 C
Temperature within limits (Y/N)?: y
Thermometer ID: 1120212072
Hot Block ID: 11
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 06, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 540452

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 10, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540452

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 540452

May 06, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 10, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
540452001	MW-SD02-04072021
540452002	MW-SD02-04072021
540452003	MW-SM46-04072021
540452004	MW-SM46-04072021
540452005	MW-S32-04072021
540452006	MW-S32-04072021
540452007	MW-SD32-04072021
540452008	MW-SD32-04072021
540452009	MW-BS32-04072021
540452010	MW-BS32-04072021
540452011	MW-S63-04072021
540452012	MW-S63-04072021
540452013	MW-BS14-04072021
540452014	MW-BS14-04072021
540452015	MW-SD24-04072021
540452016	MW-SD24-04072021
540452017	HA-11-04072021
540452018	HA-11-04072021
540452019	HA20-CMT1D1-04072021
540452020	HA20-CMT1D1-04072021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Project # 3252H
GEL Quote #: GELP18-1125

COC Number (1): 04072021

PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
Chain of Custody and Analytical Request

540452

GEL Work Order Number:
GEL Project Manager: Zach Worsham

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS)	Dissolved Metals (6020A ICP-MS)	U-235/U-238 plus Total U Calc.
<-- Preservative Type (6)									NI	NI	NI
MW-SD02-04072021	4/7/2021	13:00	N	Y	GW	U238		2	X	X	X
MW-SM46-04072021	4/7/2021	13:30	N	Y	GW	U238		2	X	X	X
MW-S32-04072021	4/7/2021	8:50	N	Y	GW	U238		2	X	X	X
MW-SD32-04072021	4/7/2021	10:50	N	Y	GW	U238		2	X	X	X
MW-BS32-04072021	4/7/2021	14:10	N	Y	GW	U238		2	X	X	X
MW-S63-04072021	4/7/2021	14:15	N	Y	GW	U238		2	X	X	X
MW-BS14-04072021	4/7/2021	13:55	N	Y	GW	U238		2	X	X	X
MW-SD24-04072021	4/7/2021	15:30	N	Y	GW	U238		2	X	X	X
HA-11-04072021	4/7/2021	15:40	N/MS/MSD	Y	GW	U238		2	X	X	X
HA20-CMT1D1-04072021	4/7/2021	16:00	N	Y	GW	U238		2	X	X	X

Comments
Note: extra sample is required for sample specific QC

Total and Diss. ICP-MS List:

Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc

U-235/U-238 plus Total U Calc. for Total and Dissolved

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/9/21	11:00	1	[signature]	4/9/21	1108
2	[signature]	4/9/21	1600	2	[signature]	4 10 21	910
3				3			

TAT Requested: Normal: X Rush: ____ Specify: ______

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ *°C*

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via NaI. MS

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 540452
Received By: Stacy Boone	Date Received: 4/10/21
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:________
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials (A) Date 4/12/21 Page 1 of 2

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC **SAMPLE RECEIPT & REVIEW CONTINUATION FORM**

Client: DMAX Received By: SB Date Received: 4/10/21 SDG/AR/COC/Work Order: 540452

7734	0170	1615	2°c
"	"	1707	3°c
"	"	1351	4°c
"	"	1590	5°c
7734	0445	7137	3°c
"	"	7089	3°c
"	"	6737	4°c
"	"	7090	5°c
"	"	7663	4°c

PM (or PMA) review: Initials CD Date 4/12/21 Page 2 of 2

Work Order Containers

Sample ID: **540452001**
Client Sample ID: **MW−SD02−04072021**
Description: **Ground Water**

Label: 540452001.01		**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
	10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
	13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
	13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
	13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to
	13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
	14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540452001.01.01		**Type: New Undefined**	
	05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
	05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452002**
Client Sample ID: **MW−SD02−04072021**
Description: **Dissolved Ground Water**

Label: 540452002.01		**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
	10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
	13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
	13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
	13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to
	13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
	14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540452002.01.01		**Type: New Undefined**	
	05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
	05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452003**
Client Sample ID: **MW−SM46−04072021**
Description: **Ground Water**

Label: 540452003.01		**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
	10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
	13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
	13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
	13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to

Work Order Containers

Sample ID: **540452003**
Client Sample ID: **MW−SM46−04072021**
Description: **Ground Water**

Label: 540452003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452003.01.01 **Type: New Undefined**

05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452004**
Client Sample ID: **MW−SM46−04072021**
Description: **Dissolved Ground Water**

Label: 540452004.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to
13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452004.01.01 **Type: New Undefined**

05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452005**
Client Sample ID: **MW−S32−04072021**
Description: **Ground Water**

Label: 540452005.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to
13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540452005**
Client Sample ID: **MW−S32−04072021**
Description: **Ground Water**

Label: 540452005.01.01	**Type: New Undefined**	
05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452006**
Client Sample ID: **MW−S32−04072021**
Description: **Dissolved Ground Water**

Label: 540452006.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to
13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452006.01.01	**Type: New Undefined**	
05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452007**
Client Sample ID: **MW−SD32−04072021**
Description: **Ground Water**

Label: 540452007.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to
13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452007.01.01	**Type: New Undefined**	
05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540452008**
Client Sample ID: **MW−SD32−04072021**
Description: **Dissolved Ground Water**

Label: 540452008.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to
13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452008.01.01	**Type: New Undefined**	
05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452009**
Client Sample ID: **MW−BS32−04072021**
Description: **Ground Water**

Label: 540452009.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to
13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452009.01.01	**Type: New Undefined**	
05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452010**
Client Sample ID: **MW−BS32−04072021**
Description: **Dissolved Ground Water**

Label: 540452010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to

Work Order Containers

Sample ID: **540452010**
Client Sample ID: **MW−BS32−04072021**
Description: **Dissolved Ground Water**

Label: 540452010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452010.01.01	**Type: New Undefined**	
29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452011**
Client Sample ID: **MW−S63−04072021**
Description: **Ground Water**

Label: 540452011.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452011.01.01	**Type: New Undefined**	
29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452012**
Client Sample ID: **MW−S63−04072021**
Description: **Dissolved Ground Water**

Label: 540452012.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540452012**
Client Sample ID: **MW−S63−04072021**
Description: **Dissolved Ground Water**

Label: 540452012.01.01 **Type: New Undefined**

29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452013**
Client Sample ID: **MW−BS14−04072021**
Description: **Ground Water**

Label: 540452013.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452013.01.01 **Type: New Undefined**

29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452014**
Client Sample ID: **MW−BS14−04072021**
Description: **Dissolved Ground Water**

Label: 540452014.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452014.01.01 **Type: New Undefined**

29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **540452015**
Client Sample ID: **MW−SD24−04072021**
Description: **Ground Water**

Label: 540452015.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452015.01.01 **Type: New Undefined**

29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452016**
Client Sample ID: **MW−SD24−04072021**
Description: **Dissolved Ground Water**

Label: 540452016.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452016.01.01 **Type: New Undefined**

29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452017**
Client Sample ID: **HA−11−04072021**
Description: **Ground Water**

Label: 540452017.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **540452017**
Client Sample ID: **HA−11−04072021**
Description: **Ground Water**

Label: 540452017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
13−APR−21 17:30:34	Ridge Gleaton	Transfered custody to batch 2114319
13−APR−21 17:30:34	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
13−APR−21 23:13:44	Ridge Gleaton	Changed batch_id from 2114319 to
13−APR−21 23:13:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
14−APR−21 07:57:51	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452017.01.01	**Type: New Undefined**	
05−MAY−21 17:04:09	Paul Boyd	Transfered custody to batch 2114321
05−MAY−21 17:04:09	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452018**
Client Sample ID: **HA−11−04072021**
Description: **Dissolved Ground Water**

Label: 540452018.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 540452018.01.01	**Type: New Undefined**	
29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452019**
Client Sample ID: **HA20−CMT1D1−04072021**
Description: **Ground Water**

Label: 540452019.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to
12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples

Work Order Containers

Sample ID: **540452019**
Client Sample ID: **HA20−CMT1D1−04072021**
Description: **Ground Water**

Label: 540452019.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**	
	13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540452019.01.01	**Type: New Undefined**		
	29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
	29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **540452020**
Client Sample ID: **HA20−CMT1D1−04072021**
Description: **Dissolved Ground Water**

Label: 540452020.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**	
	10−APR−21 12:24:32	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
	12−APR−21 18:08:37	Ridge Gleaton	Transfered custody to batch 2114322
	12−APR−21 18:08:37	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
	12−APR−21 23:18:44	Ridge Gleaton	Changed batch_id from 2114322 to
	12−APR−21 23:18:44	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
	13−APR−21 08:41:30	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 540452020.01.01	**Type: New Undefined**		
	29−APR−21 16:09:22	Paul Boyd	Transfered custody to batch 2114324
	29−APR−21 16:09:22	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.
For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 06 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 540452

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 34
Analytical Batches: 2114321 and 2114324

Product: **Inorganic Calculations**
Analytical Method: SW846 6020
Analytical Procedure: GL-GC-E-107 REV# 10
Analytical Batch: 2124964

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batches: 2114319 and 2114322

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
540452001	MW-SD02-04072021
540452002	MW-SD02-04072021
540452003	MW-SM46-04072021
540452004	MW-SM46-04072021
540452005	MW-S32-04072021
540452006	MW-S32-04072021
540452007	MW-SD32-04072021
540452008	MW-SD32-04072021
540452009	MW-BS32-04072021
540452010	MW-BS32-04072021
540452011	MW-S63-04072021
540452012	MW-S63-04072021
540452013	MW-BS14-04072021
540452014	MW-BS14-04072021
540452015	MW-SD24-04072021
540452016	MW-SD24-04072021
540452017	HA-11-04072021
540452018	HA-11-04072021
540452019	HA20-CMT1D1-04072021
540452020	HA20-CMT1D1-04072021
1204793794	Method Blank (MB)**ICP-MS**
1204793807	Method Blank (MB)**ICP-MS**
1204793795	Laboratory Control Sample (LCS)
1204793808	Laboratory Control Sample (LCS)
1204793798	540452017(HA-11-04072021L) Serial Dilution (SD)
1204793811	540452018(HA-11-04072021L) Serial Dilution (SD)
1204793796	540452017(HA-11-04072021S) Matrix Spike (MS)
1204793809	540452018(HA-11-04072021S) Matrix Spike (MS)

1204793797 540452017(HA-11-04072021SD) Matrix Spike Duplicate (MSD)
1204793810 540452018(HA-11-04072021SD) Matrix Spike Duplicate (MSD)

Samples 540452001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 540452003 (MW-SM46-04072021), 540452004 (MW-SM46-04072021), 540452017 (HA-11-04072021), 540452015 (MW-SD24-04072021), 540452016 (MW-SD24-04072021), 540452019 (HA20-CMT1D1-04072021) and 540452020 (HA20-CMT1D1-04072021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	540452						
	003	**004**	**015**	**016**	**017**	**019**	**020**
Calcium	10X	10X	1X	1X	1X	1X	1X
Iron	10X	10X	1X	1X	10X	1X	1X
Magnesium	10X	10X	1X	1X	1X	1X	1X
Manganese	1X	1X	1X	1X	1X	10X	10X
Sodium	10X	10X	1X	1X	1X	10X	10X
Uranium-238	1X	1X	2X	2X	1X	1X	1X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 540452 GEL Work Order: 540452

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

** Indicates analyte is a surrogate compound.

J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

U Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Jamie Johnson**

Date: 07 MAY 2021 **Title: Group Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452001 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−SD02−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	27.7	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−39−3	Barium	17.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−70−2	Calcium	16700	ug/L		80.0	200	200	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−50−8	Copper	2.69	ug/L		0.300	2.00	2.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7439−89−6	Iron	59.7	ug/L	J	33.0	100	100	1	MS	PRB	05/07/21 07:38	210506−15	2114321
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7439−95−4	Magnesium	5300	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7439−96−5	Manganese	3.63	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7439−98−7	Molybdenum	0.359	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−02−0	Nickel	1.69	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−09−7	Potassium	2950	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−23−5	Sodium	24400	ug/L		80.0	250	250	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−61−1	Total Uranium	0.121	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:46	210506−7	2114321
7440−61−1	Uranium−238	0.121	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:46	210506−7	2114321
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:09	210505−6	2114321
7440−66−6	Zinc	14.4	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:09	210505−6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452002 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-SD02-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-39-3	Barium	17.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-70-2	Calcium	16900	ug/L		80.0	200	200	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-50-8	Copper	2.40	ug/L		0.300	2.00	2.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/07/21 07:40	210506-15	2114321
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7439-95-4	Magnesium	5250	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7439-96-5	Manganese	3.37	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7439-98-7	Molybdenum	0.314	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-02-0	Nickel	2.03	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-09-7	Potassium	2940	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-23-5	Sodium	23900	ug/L		80.0	250	250	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:48	210506-7	2114321
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:48	210506-7	2114321
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:13	210505-6	2114321
7440-66-6	Zinc	13.7	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:13	210505-6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452003 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−SM46−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	269	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−38−2	Arsenic	3.68	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−39−3	Barium	155	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−70−2	Calcium	53700	ug/L		800	2000	2000	10	MS	PRB	05/06/21 16:05	210506−9	2114321
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−48−4	Cobalt	1.41	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−50−8	Copper	0.738	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7439−89−6	Iron	23900	ug/L		330	1000	1000	10	MS	PRB	05/07/21 07:42	210506−15	2114321
7439−92−1	Lead	0.775	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7439−95−4	Magnesium	20800	ug/L		100	300	300	10	MS	PRB	05/06/21 16:05	210506−9	2114321
7439−96−5	Manganese	420	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−02−0	Nickel	3.29	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−09−7	Potassium	7120	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−23−5	Sodium	56700	ug/L		800	2500	2500	10	MS	PRB	05/06/21 16:05	210506−9	2114321
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−61−1	Total Uranium	0.130	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:49	210506−7	2114321
7440−61−1	Uranium−238	0.130	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:49	210506−7	2114321
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:17	210505−6	2114321
7440−66−6	Zinc	4.68	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:17	210505−6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452004 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-SM46-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	161	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-38-2	Arsenic	2.63	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-39-3	Barium	146	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-70-2	Calcium	53400	ug/L		800	2000	2000	10	MS	PRB	05/06/21 16:09	210506-9	2114321
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-48-4	Cobalt	1.17	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-50-8	Copper	0.417	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7439-89-6	Iron	20900	ug/L		330	1000	1000	10	MS	PRB	05/07/21 07:44	210506-15	2114321
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7439-95-4	Magnesium	20700	ug/L		100	300	300	10	MS	PRB	05/06/21 16:09	210506-9	2114321
7439-96-5	Manganese	393	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-02-0	Nickel	2.98	ug/L		0.600	2.00	2.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-09-7	Potassium	6970	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-23-5	Sodium	56700	ug/L		800	2500	2500	10	MS	PRB	05/06/21 16:09	210506-9	2114321
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:51	210506-7	2114321
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:51	210506-7	2114321
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:20	210505-6	2114321
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:20	210505-6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452005 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−S32−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	21.6	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−39−3	Barium	14.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−70−2	Calcium	16300	ug/L		80.0	200	200	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−48−4	Cobalt	2.25	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−50−8	Copper	0.697	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7439−89−6	Iron	45.5	ug/L	J	33.0	100	100	1	MS	PRB	05/07/21 07:45	210506−15	2114321
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7439−95−4	Magnesium	5380	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7439−96−5	Manganese	3.86	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7439−98−7	Molybdenum	0.249	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−02−0	Nickel	1.18	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−09−7	Potassium	3150	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−23−5	Sodium	11500	ug/L		80.0	250	250	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−61−1	Total Uranium	0.0676	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:53	210506−7	2114321
7440−61−1	Uranium−238	0.0676	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:53	210506−7	2114321
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:24	210505−6	2114321
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:24	210505−6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452006 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-S32-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-39-3	Barium	14.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-70-2	Calcium	16500	ug/L		80.0	200	200	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-48-4	Cobalt	2.04	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-50-8	Copper	0.689	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/07/21 07:47	210506-15	2114321
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7439-95-4	Magnesium	5490	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7439-98-7	Molybdenum	0.290	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-02-0	Nickel	1.12	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-09-7	Potassium	3220	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-23-5	Sodium	11900	ug/L		80.0	250	250	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 11:55	210506-7	2114321
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/06/21 11:55	210506-7	2114321
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:28	210505-6	2114321
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:28	210505-6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452007 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−SD32−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	190	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−39−3	Barium	14.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−70−2	Calcium	14500	ug/L		80.0	200	200	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−48−4	Cobalt	0.614	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−50−8	Copper	1.52	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7439−89−6	Iron	353	ug/L		33.0	100	100	1	MS	PRB	05/07/21 07:53	210506−15	2114321
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7439−95−4	Magnesium	3360	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7439−96−5	Manganese	20.6	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7439−98−7	Molybdenum	0.273	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−02−0	Nickel	1.75	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−09−7	Potassium	2440	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−23−5	Sodium	11400	ug/L		80.0	250	250	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−61−1	Total Uranium	0.152	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 12:00	210506−7	2114321
7440−61−1	Uranium−238	0.152	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/06/21 12:00	210506−7	2114321
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:38	210505−6	2114321
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:38	210505−6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452008 **BASIS:** Filtered **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−SD32−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−39−3	Barium	12.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−70−2	Calcium	14700	ug/L		80.0	200	200	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−50−8	Copper	0.304	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/07/21 07:55	210506−15	2114321
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7439−95−4	Magnesium	3330	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−02−0	Nickel	1.31	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−09−7	Potassium	2390	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−23−5	Sodium	11500	ug/L		80.0	250	250	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 12:02	210506−7	2114321
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/06/21 12:02	210506−7	2114321
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:42	210505−6	2114321
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:42	210505−6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452009 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−BS32−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	160	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−38−2	Arsenic	3.39	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−39−3	Barium	96.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−70−2	Calcium	45400	ug/L		80.0	200	200	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−50−8	Copper	0.845	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7439−89−6	Iron	2980	ug/L		33.0	100	100	1	MS	PRB	05/07/21 07:57	210506−15	2114321
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7439−95−4	Magnesium	19200	ug/L		10.0	30.0	30.0	1	MS	PRB	05/06/21 15:16	210506−9	2114321
7439−96−5	Manganese	272	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7439−98−7	Molybdenum	1.51	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−02−0	Nickel	1.11	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−09−7	Potassium	5560	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−23−5	Sodium	27500	ug/L		80.0	250	250	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−61−1	Total Uranium	0.0755	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 12:04	210506−7	2114321
7440−61−1	Uranium−238	0.0755	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/06/21 12:04	210506−7	2114321
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:46	210505−6	2114321
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:46	210505−6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452010 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-BS32-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-38-2	Arsenic	3.42	ug/L	J	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-39-3	Barium	106	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-70-2	Calcium	46200	ug/L		80.0	200	200	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7439-89-6	Iron	2540	ug/L		33.0	100	100	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7439-95-4	Magnesium	18600	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7439-96-5	Manganese	272	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7439-98-7	Molybdenum	1.65	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-09-7	Potassium	5540	ug/L		80.0	300	300	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-23-5	Sodium	28000	ug/L		80.0	250	250	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-61-1	Total Uranium	0.0672	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:44	210430-1	2114324
7440-61-1	Uranium-238	0.0672	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:44	210430-1	2114324
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:17	210430-4	2114324
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:17	210430-4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452011 **BASIS:** As Received **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-S63-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-39-3	Barium	34.4	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-70-2	Calcium	21100	ug/L		80.0	200	200	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-48-4	Cobalt	0.934	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-50-8	Copper	1.27	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7439-89-6	Iron	47.5	ug/L	J	33.0	100	100	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7439-95-4	Magnesium	5120	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7439-96-5	Manganese	430	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7439-98-7	Molybdenum	17.3	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-02-0	Nickel	1.26	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-09-7	Potassium	4260	ug/L		80.0	300	300	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-23-5	Sodium	30900	ug/L		80.0	250	250	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-61-1	Total Uranium	0.255	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:46	210430-1	2114324
7440-61-1	Uranium-238	0.255	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:46	210430-1	2114324
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:21	210430-4	2114324
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:21	210430-4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452012 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-S63-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-39-3	Barium	35.2	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-70-2	Calcium	21700	ug/L		80.0	200	200	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-48-4	Cobalt	0.910	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-50-8	Copper	1.44	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7439-89-6	Iron	50.5	ug/L	J	33.0	100	100	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7439-95-4	Magnesium	5240	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7439-96-5	Manganese	423	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7439-98-7	Molybdenum	18.0	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-02-0	Nickel	3.40	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-09-7	Potassium	4320	ug/L		80.0	300	300	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-23-5	Sodium	32000	ug/L		80.0	250	250	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-61-1	Total Uranium	0.192	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:48	210430-1	2114324
7440-61-1	Uranium-238	0.192	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:48	210430-1	2114324
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:24	210430-4	2114324
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:24	210430-4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452013 **BASIS:** As Received **DATE COLLECTED** 07−APR−21

CLIENT ID: MW−BS14−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−39−3	Barium	37.5	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−70−2	Calcium	45000	ug/L		80.0	200	200	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−48−4	Cobalt	2.74	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−50−8	Copper	0.661	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7439−89−6	Iron	555	ug/L		33.0	100	100	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7439−95−4	Magnesium	16200	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7439−96−5	Manganese	998	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7439−98−7	Molybdenum	1.13	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−02−0	Nickel	5.24	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−09−7	Potassium	7330	ug/L		80.0	300	300	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−23−5	Sodium	22500	ug/L		80.0	250	250	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−61−1	Total Uranium	1.56	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117−96−1	Uranium−235	0.0105	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:50	210430−1	2114324
7440−61−1	Uranium−238	1.55	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:50	210430−1	2114324
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:28	210430−4	2114324
7440−66−6	Zinc	5.42	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:28	210430−4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452014 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-BS14-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-39-3	Barium	37.4	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-70-2	Calcium	44300	ug/L		80.0	200	200	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-48-4	Cobalt	2.48	ug/L		0.300	1.00	1.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7439-89-6	Iron	505	ug/L		33.0	100	100	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7439-95-4	Magnesium	16200	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7439-96-5	Manganese	995	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7439-98-7	Molybdenum	1.04	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-02-0	Nickel	5.07	ug/L		0.600	2.00	2.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-09-7	Potassium	7340	ug/L		80.0	300	300	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-23-5	Sodium	22400	ug/L		80.0	250	250	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-61-1	Total Uranium	1.36	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.0104	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:52	210430-1	2114324
7440-61-1	Uranium-238	1.35	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 12:52	210430-1	2114324
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:32	210430-4	2114324
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:32	210430-4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452015 **BASIS:** As Received **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-SD24-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	39.2	ug/L	J	19.3	50.0	50.0	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-39-3	Barium	5.87	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-70-2	Calcium	21800	ug/L		80.0	200	200	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-48-4	Cobalt	0.542	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-50-8	Copper	18.4	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7439-89-6	Iron	60.9	ug/L	J	33.0	100	100	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7439-95-4	Magnesium	5350	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7439-96-5	Manganese	6.77	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7439-98-7	Molybdenum	10.1	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-02-0	Nickel	1.07	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-09-7	Potassium	3390	ug/L		80.0	300	300	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-23-5	Sodium	28000	ug/L		80.0	250	250	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-61-1	Total Uranium	160	ug/L		0.134	0.400	0.400			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.313	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 12:53	210430-1	2114324
7440-61-1	Uranium-238	160	ug/L		0.134	0.400	0.400	2	MS	PRB	04/30/21 12:55	210430-1	2114324
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:35	210430-4	2114324
7440-66-6	Zinc	3.49	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:35	210430-4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452016 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: MW-SD24-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-39-3	Barium	5.29	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-70-2	Calcium	21200	ug/L		80.0	200	200	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-48-4	Cobalt	0.479	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-50-8	Copper	17.1	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7439-95-4	Magnesium	5220	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7439-96-5	Manganese	5.68	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7439-98-7	Molybdenum	10.1	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-02-0	Nickel	1.10	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-09-7	Potassium	3310	ug/L		80.0	300	300	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-23-5	Sodium	27600	ug/L		80.0	250	250	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-61-1	Total Uranium	120	ug/L		0.134	0.400	0.400			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.249	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 13:01	210430-1	2114324
7440-61-1	Uranium-238	120	ug/L		0.134	0.400	0.400	2	MS	PRB	04/30/21 13:02	210430-1	2114324
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:39	210430-4	2114324
7440-66-6	Zinc	3.38	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:39	210430-4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452017 **BASIS:** As Received **DATE COLLECTED** 07-APR-21

CLIENT ID: HA-11-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	184	ug/L		19.3	50.0	50.0	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-38-2	Arsenic	37.4	ug/L		2.00	5.00	5.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-39-3	Barium	10.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-70-2	Calcium	2840	ug/L		80.0	200	200	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-48-4	Cobalt	1.07	ug/L		0.300	1.00	1.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-50-8	Copper	1.69	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7439-89-6	Iron	19000	ug/L		330	1000	1000	10	MS	PRB	05/07/21 07:58	210506-15	2114321
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7439-95-4	Magnesium	535	ug/L		10.0	30.0	30.0	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7439-96-5	Manganese	48.0	ug/L		1.00	5.00	5.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7439-98-7	Molybdenum	1.30	ug/L		0.200	1.00	1.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-02-0	Nickel	0.959	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-09-7	Potassium	655	ug/L		80.0	300	300	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-23-5	Sodium	2760	ug/L		80.0	250	250	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-61-1	Total Uranium	0.0808	ug/L	J	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/06/21 12:06	210506-7	2114321
7440-61-1	Uranium-238	0.0808	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/06/21 12:06	210506-7	2114321
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:49	210505-6	2114321
7440-66-6	Zinc	11.1	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/05/21 20:49	210505-6	2114321

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114321	2114319	SW846 3005A	50	mL	50	mL	04/14/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452018 **BASIS:** Filtered **DATE COLLECTED** 07-APR-21

CLIENT ID: HA-11-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-39-3	Barium	9.11	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-70-2	Calcium	2070	ug/L		80.0	200	200	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-48-4	Cobalt	0.541	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-50-8	Copper	2.52	ug/L		0.300	2.00	2.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7439-89-6	Iron	156	ug/L		33.0	100	100	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7439-95-4	Magnesium	504	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7439-96-5	Manganese	29.6	ug/L		1.00	5.00	5.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-02-0	Nickel	0.641	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-09-7	Potassium	599	ug/L		80.0	300	300	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-23-5	Sodium	2730	ug/L		80.0	250	250	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 13:04	210430-1	2114324
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	04/30/21 13:04	210430-1	2114324
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:50	210430-4	2114324
7440-66-6	Zinc	3.89	ug/L	J	3.30	20.0	20.0	1	MS	PRB	04/30/21 21:50	210430-4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452019 **BASIS:** As Received **DATE COLLECTED** 07-APR-21

CLIENT ID: HA20-CMT1D1-04072021 **LEVEL:** Low **DATE RECEIVED** 10-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	253	ug/L		19.3	50.0	50.0	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-38-2	Arsenic	3.50	ug/L	J	2.00	5.00	5.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-39-3	Barium	50.2	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-70-2	Calcium	48200	ug/L		80.0	200	200	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-48-4	Cobalt	0.969	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-50-8	Copper	0.958	ug/L	J	0.300	2.00	2.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7439-89-6	Iron	1000	ug/L		33.0	100	100	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7439-95-4	Magnesium	7780	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7439-96-5	Manganese	1580	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 13:32	210503-5	2114324
7439-98-7	Molybdenum	123	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-02-0	Nickel	1.61	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-09-7	Potassium	15100	ug/L		80.0	300	300	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-23-5	Sodium	387000	ug/L		800	2500	2500	10	MS	PRB	05/03/21 13:32	210503-5	2114324
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-61-1	Total Uranium	77.3	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117-96-1	Uranium-235	0.163	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 13:13	210430-1	2114324
7440-61-1	Uranium-238	77.1	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 13:13	210430-1	2114324
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 22:08	210430-4	2114324
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 22:08	210430-4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 540452 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 540452020 **BASIS:** Filtered **DATE COLLECTED** 07−APR−21

CLIENT ID: HA20−CMT1D1−04072021 **LEVEL:** Low **DATE RECEIVED** 10−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	31.9	ug/L	J	19.3	50.0	50.0	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−38−2	Arsenic	3.38	ug/L	J	2.00	5.00	5.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−39−3	Barium	47.3	ug/L		0.670	4.00	4.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−70−2	Calcium	45000	ug/L		80.0	200	200	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−48−4	Cobalt	0.793	ug/L	J	0.300	1.00	1.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7439−89−6	Iron	588	ug/L		33.0	100	100	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7439−95−4	Magnesium	7350	ug/L		10.0	30.0	30.0	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7439−96−5	Manganese	1430	ug/L		10.0	50.0	50.0	10	MS	PRB	05/03/21 13:34	210503−5	2114324
7439−98−7	Molybdenum	118	ug/L		0.200	1.00	1.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−02−0	Nickel	1.19	ug/L	J	0.600	2.00	2.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−09−7	Potassium	14500	ug/L		80.0	300	300	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−23−5	Sodium	369000	ug/L		800	2500	2500	10	MS	PRB	05/03/21 13:34	210503−5	2114324
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−61−1	Total Uranium	62.8	ug/L		0.0670	0.200	0.200			JJ2	05/07/21 11:17		2124964
15117−96−1	Uranium−235	0.129	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	04/30/21 13:15	210430−1	2114324
7440−61−1	Uranium−238	62.7	ug/L		0.0670	0.200	0.200	1	MS	PRB	04/30/21 13:15	210430−1	2114324
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 22:11	210430−4	2114324
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	04/30/21 22:11	210430−4	2114324

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2114324	2114322	SW846 3005A	50	mL	50	mL	04/13/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.35	ug/L	0.36	ug/L	98.4	90.0 − 110.0	MS	30−APR−21 10:08	210430−1
	Uranium−238	49.3	ug/L	49.64	ug/L	99.2	90.0 − 110.0	MS	30−APR−21 10:08	210430−1
	Aluminum	5210	ug/L	5050	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Antimony	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Arsenic	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Barium	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Beryllium	53.3	ug/L	50	ug/L	106.6	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Cadmium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Calcium	5100	ug/L	5000	ug/L	102	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Chromium	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Cobalt	52.7	ug/L	50	ug/L	105.4	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Copper	53.4	ug/L	50	ug/L	106.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Iron	5170	ug/L	5000	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Lead	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Magnesium	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Manganese	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Molybdenum	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Nickel	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Potassium	5160	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Selenium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Silver	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Sodium	5470	ug/L	5000	ug/L	109.5	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Thallium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Thorium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Vanadium	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Zinc	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 16:50	210430−4
	Manganese	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	03−MAY−21 12:23	210503−5
	Sodium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	03−MAY−21 12:23	210503−5
	Aluminum	4920	ug/L	5050	ug/L	97.4	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Antimony	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Arsenic	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Beryllium	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Cadmium	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Calcium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Chromium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Cobalt	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Copper	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Lead	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Magnesium	4880	ug/L	5000	ug/L	97.7	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Manganese	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Molybdenum	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Nickel	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Potassium	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Selenium	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Silver	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Sodium	5180	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Thorium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Vanadium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Zinc	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	05−MAY−21 18:14	210505−6
	Uranium−235	0.36	ug/L	0.36	ug/L	101.2	90.0 − 110.0	MS	06−MAY−21 10:52	210506−7
	Uranium−238	49.3	ug/L	49.64	ug/L	99.3	90.0 − 110.0	MS	06−MAY−21 10:52	210506−7
	Calcium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	MS	06−MAY−21 13:57	210506−9
	Magnesium	5330	ug/L	5000	ug/L	106.5	90.0 − 110.0	MS	06−MAY−21 13:57	210506−9
	Sodium	5090	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	06−MAY−21 13:57	210506−9
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	07−MAY−21 07:21	210506−15
CCV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	98.7	90.0 − 110.0	MS	30−APR−21 10:17	210430−1
	Uranium−238	49.4	ug/L	49.64	ug/L	99.5	90.0 − 110.0	MS	30−APR−21 10:17	210430−1
	Aluminum	5110	ug/L	5050	ug/L	101.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Antimony	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Arsenic	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Barium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Beryllium	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Cadmium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Calcium	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Chromium	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Cobalt	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Copper	52.8	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Iron	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Lead	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Magnesium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Manganese	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Molybdenum	52.7	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Nickel	52.6	ug/L	50	ug/L	105.1	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Potassium	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Selenium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Silver	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Sodium	5380	ug/L	5000	ug/L	107.6	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Thallium	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Thorium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Vanadium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Zinc	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	30−APR−21 17:08	210430−4
	Manganese	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	03−MAY−21 12:33	210503−5
	Sodium	5200	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	03−MAY−21 12:33	210503−5
	Aluminum	4940	ug/L	5050	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Antimony	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Arsenic	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Barium	48.3	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Beryllium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Cadmium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Calcium	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6

METALS
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Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Chromium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Cobalt	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Copper	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Lead	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Magnesium	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Manganese	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Molybdenum	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Nickel	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Potassium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Selenium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Silver	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Sodium	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Thallium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Thorium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Vanadium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Zinc	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	05−MAY−21 18:32	210505−6
	Uranium−235	0.36	ug/L	0.36	ug/L	99.7	90.0 − 110.0	MS	06−MAY−21 11:01	210506−7
	Uranium−238	48.2	ug/L	49.64	ug/L	97	90.0 − 110.0	MS	06−MAY−21 11:01	210506−7
	Calcium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	06−MAY−21 14:15	210506−9
	Magnesium	5300	ug/L	5000	ug/L	105.9	90.0 − 110.0	MS	06−MAY−21 14:15	210506−9
	Sodium	5170	ug/L	5000	ug/L	103.4	90.0 − 110.0	MS	06−MAY−21 14:15	210506−9
	Iron	5020	ug/L	5000	ug/L	100.5	90.0 − 110.0	MS	07−MAY−21 07:30	210506−15
CCV02										
	Uranium−235	0.35	ug/L	0.36	ug/L	98.4	90.0 − 110.0	MS	30−APR−21 12:37	210430−1
	Uranium−238	49.2	ug/L	49.64	ug/L	99.1	90.0 − 110.0	MS	30−APR−21 12:37	210430−1
	Aluminum	5180	ug/L	5050	ug/L	102.6	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Antimony	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Arsenic	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Barium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Beryllium	53	ug/L	50	ug/L	106.1	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Cadmium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 17:19	210430−4

METALS
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Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Chromium	52.1	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Cobalt	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Copper	53.2	ug/L	50	ug/L	106.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Iron	5220	ug/L	5000	ug/L	104.5	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Lead	52.3	ug/L	50	ug/L	104.7	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Magnesium	5210	ug/L	5000	ug/L	104.2	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Manganese	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Molybdenum	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Nickel	52.9	ug/L	50	ug/L	105.8	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Potassium	5210	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Selenium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Silver	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Sodium	5430	ug/L	5000	ug/L	108.7	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Thorium	54.9	ug/L	50	ug/L	109.8	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Vanadium	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Zinc	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 17:19	210430−4
	Manganese	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	03−MAY−21 12:39	210503−5
	Sodium	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	MS	03−MAY−21 12:39	210503−5
	Aluminum	4920	ug/L	5050	ug/L	97.4	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Antimony	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Arsenic	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Barium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Beryllium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Cadmium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Calcium	4850	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Chromium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Cobalt	48.7	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Copper	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Lead	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6

METALS
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Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Magnesium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Manganese	48.2	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Molybdenum	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Nickel	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Potassium	4870	ug/L	5000	ug/L	97.5	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Selenium	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Silver	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Sodium	5150	ug/L	5000	ug/L	103	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Thallium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Thorium	54.3	ug/L	50	ug/L	108.5	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Vanadium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Zinc	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	05−MAY−21 18:43	210505−6
	Uranium−235	0.36	ug/L	0.36	ug/L	99.5	90.0 − 110.0	MS	06−MAY−21 11:39	210506−7
	Uranium−238	49.2	ug/L	49.64	ug/L	99.1	90.0 − 110.0	MS	06−MAY−21 11:39	210506−7
	Calcium	5020	ug/L	5000	ug/L	100.5	90.0 − 110.0	MS	06−MAY−21 14:26	210506−9
	Magnesium	5240	ug/L	5000	ug/L	104.8	90.0 − 110.0	MS	06−MAY−21 14:26	210506−9
	Sodium	5140	ug/L	5000	ug/L	102.8	90.0 − 110.0	MS	06−MAY−21 14:26	210506−9
	Iron	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	07−MAY−21 07:49	210506−15
CCV03										
	Uranium−235	0.35	ug/L	0.36	ug/L	97	90.0 − 110.0	MS	30−APR−21 12:57	210430−1
	Uranium−238	48.1	ug/L	49.64	ug/L	96.9	90.0 − 110.0	MS	30−APR−21 12:57	210430−1
	Aluminum	4880	ug/L	5050	ug/L	96.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Antimony	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Arsenic	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Barium	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Beryllium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Cadmium	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Calcium	4720	ug/L	5000	ug/L	94.4	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Chromium	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Cobalt	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Copper	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	30−APR−21 21:03	210430−4

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METALS
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Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Iron	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Lead	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Magnesium	4910	ug/L	5000	ug/L	98.3	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Manganese	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Molybdenum	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Nickel	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Potassium	4790	ug/L	5000	ug/L	95.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Selenium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Silver	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Sodium	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Thallium	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Thorium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Vanadium	48.1	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Zinc	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	30−APR−21 21:03	210430−4
	Manganese	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	03−MAY−21 13:14	210503−5
	Sodium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	03−MAY−21 13:14	210503−5
	Aluminum	4870	ug/L	5050	ug/L	96.5	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Antimony	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Arsenic	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Barium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Beryllium	47.5	ug/L	50	ug/L	95	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Cadmium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Calcium	4840	ug/L	5000	ug/L	96.7	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Chromium	47.7	ug/L	50	ug/L	95.3	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Cobalt	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Copper	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Lead	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Magnesium	4790	ug/L	5000	ug/L	95.8	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Manganese	48.1	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Molybdenum	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Nickel	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6

METALS
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Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Potassium	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Selenium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Silver	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Sodium	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Thorium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Vanadium	47.5	ug/L	50	ug/L	95	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Zinc	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	05−MAY−21 19:55	210505−6
	Uranium−235	0.36	ug/L	0.36	ug/L	98.6	90.0 − 110.0	MS	06−MAY−21 11:57	210506−7
	Uranium−238	48.6	ug/L	49.64	ug/L	97.8	90.0 − 110.0	MS	06−MAY−21 11:57	210506−7
	Calcium	4960	ug/L	5000	ug/L	99.3	90.0 − 110.0	MS	06−MAY−21 15:02	210506−9
	Magnesium	5160	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	06−MAY−21 15:02	210506−9
	Sodium	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	06−MAY−21 15:02	210506−9
	Iron	4890	ug/L	5000	ug/L	97.9	90.0 − 110.0	MS	07−MAY−21 08:06	210506−15
CCV04										
	Uranium−235	0.35	ug/L	0.36	ug/L	96.9	90.0 − 110.0	MS	30−APR−21 13:17	210430−1
	Uranium−238	48.5	ug/L	49.64	ug/L	97.7	90.0 − 110.0	MS	30−APR−21 13:17	210430−1
	Aluminum	4810	ug/L	5050	ug/L	95.3	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Antimony	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Arsenic	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Barium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Beryllium	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Cadmium	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Calcium	4670	ug/L	5000	ug/L	93.3	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Chromium	47.3	ug/L	50	ug/L	94.6	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Cobalt	47.4	ug/L	50	ug/L	94.9	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Copper	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Iron	4700	ug/L	5000	ug/L	93.9	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Magnesium	4900	ug/L	5000	ug/L	98.1	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Manganese	47.4	ug/L	50	ug/L	94.8	90.0 − 110.0	MS	30−APR−21 21:43	210430−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Molybdenum	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Nickel	47.7	ug/L	50	ug/L	95.4	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Potassium	4720	ug/L	5000	ug/L	94.4	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Selenium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Silver	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Sodium	5070	ug/L	5000	ug/L	101.5	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Thallium	48.6	ug/L	50	ug/L	97.2	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Thorium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Vanadium	47.4	ug/L	50	ug/L	94.8	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Zinc	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	30−APR−21 21:43	210430−4
	Manganese	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	03−MAY−21 13:36	210503−5
	Sodium	5080	ug/L	5000	ug/L	101.5	90.0 − 110.0	MS	03−MAY−21 13:36	210503−5
	Aluminum	4830	ug/L	5050	ug/L	95.7	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Antimony	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Arsenic	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Barium	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Beryllium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Cadmium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Calcium	4710	ug/L	5000	ug/L	94.1	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Chromium	47.2	ug/L	50	ug/L	94.5	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Cobalt	47.4	ug/L	50	ug/L	94.8	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Copper	47.7	ug/L	50	ug/L	95.5	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Lead	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Magnesium	4750	ug/L	5000	ug/L	94.9	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Manganese	47.3	ug/L	50	ug/L	94.6	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Molybdenum	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Nickel	47.5	ug/L	50	ug/L	94.9	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Potassium	4740	ug/L	5000	ug/L	94.7	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Selenium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Silver	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Sodium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thallium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Thorium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Vanadium	47.4	ug/L	50	ug/L	94.7	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Zinc	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	05−MAY−21 20:31	210505−6
	Uranium−235	0.37	ug/L	0.36	ug/L	101.6	90.0 − 110.0	MS	06−MAY−21 12:14	210506−7
	Uranium−238	49.2	ug/L	49.64	ug/L	99.1	90.0 − 110.0	MS	06−MAY−21 12:14	210506−7
	Calcium	4970	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	06−MAY−21 15:38	210506−9
	Magnesium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	06−MAY−21 15:38	210506−9
	Sodium	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	06−MAY−21 15:38	210506−9
CCV05										
	Aluminum	4730	ug/L	5050	ug/L	93.6	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Antimony	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Barium	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Beryllium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Cadmium	52.2	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Calcium	4600	ug/L	5000	ug/L	92	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Chromium	47	ug/L	50	ug/L	93.9	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Cobalt	46.9	ug/L	50	ug/L	93.8	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Copper	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Iron	4660	ug/L	5000	ug/L	93.2	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Lead	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Magnesium	4770	ug/L	5000	ug/L	95.3	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Manganese	47	ug/L	50	ug/L	94.1	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Molybdenum	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Nickel	47.3	ug/L	50	ug/L	94.5	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Potassium	4680	ug/L	5000	ug/L	93.7	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Selenium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Silver	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Sodium	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Thallium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	30−APR−21 22:15	210430−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thorium	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Vanadium	46.6	ug/L	50	ug/L	93.3	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Zinc	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	30−APR−21 22:15	210430−4
	Aluminum	4710	ug/L	5050	ug/L	93.4	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Antimony	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Arsenic	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Barium	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Beryllium	46.8	ug/L	50	ug/L	93.6	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Cadmium	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Calcium	4650	ug/L	5000	ug/L	93	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Chromium	45.9	ug/L	50	ug/L	91.8	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Cobalt	45.8	ug/L	50	ug/L	91.6	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Copper	46.7	ug/L	50	ug/L	93.4	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Lead	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Magnesium	4640	ug/L	5000	ug/L	92.8	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Manganese	46	ug/L	50	ug/L	92.1	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Molybdenum	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Nickel	46.4	ug/L	50	ug/L	92.8	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Potassium	4650	ug/L	5000	ug/L	93	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Selenium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Silver	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Sodium	4920	ug/L	5000	ug/L	98.4	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Thallium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Thorium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Vanadium	45.7	ug/L	50	ug/L	91.5	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Zinc	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	05−MAY−21 21:07	210505−6
	Calcium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	06−MAY−21 16:30	210506−9
	Magnesium	5170	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	06−MAY−21 16:30	210506−9
	Sodium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	06−MAY−21 16:30	210506−9

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0012	ug/L	.0014	ug/L	85.7	80.0 − 120.0	MS	30−APR−21 10:11	210430−1
	Uranium−238	.192	ug/L	.2	ug/L	96.2	80.0 − 120.0	MS	30−APR−21 10:11	210430−1
	Aluminum	50.1	ug/L	50	ug/L	100.2	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Antimony	2.9	ug/L	3	ug/L	96.6	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Arsenic	4.8	ug/L	5	ug/L	95.9	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Barium	4.28	ug/L	4	ug/L	106.9	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Beryllium	.563	ug/L	.5	ug/L	112.6	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Cadmium	.957	ug/L	1	ug/L	95.7	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Calcium	230	ug/L	200	ug/L	115	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Chromium	10.2	ug/L	10	ug/L	102.4	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Cobalt	1.04	ug/L	1	ug/L	104.3	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Copper	2.1	ug/L	2	ug/L	105.2	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Iron	101	ug/L	100	ug/L	101.3	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Lead	2.06	ug/L	2	ug/L	103.2	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Magnesium	29.3	ug/L	30	ug/L	97.6	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Manganese	5.13	ug/L	5	ug/L	102.6	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Molybdenum	.963	ug/L	1	ug/L	96.3	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Nickel	2.09	ug/L	2	ug/L	104.5	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Potassium	301	ug/L	300	ug/L	100.4	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Selenium	4.76	ug/L	5	ug/L	95.1	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Silver	.965	ug/L	1	ug/L	96.5	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Sodium	262	ug/L	250	ug/L	104.9	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Thallium	1.79	ug/L	2	ug/L	89.7	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Thorium	2.04	ug/L	2	ug/L	102.2	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Vanadium	20.1	ug/L	20	ug/L	100.3	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Zinc	20.9	ug/L	20	ug/L	104.3	80.0 − 120.0	MS	30−APR−21 16:57	210430−4
	Manganese	5.19	ug/L	5	ug/L	103.9	80.0 − 120.0	MS	03−MAY−21 12:27	210503−5
	Sodium	273	ug/L	250	ug/L	109.4	80.0 − 120.0	MS	03−MAY−21 12:27	210503−5
	Aluminum	46.4	ug/L	50	ug/L	92.7	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Antimony	2.79	ug/L	3	ug/L	93	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Arsenic	4.57	ug/L	5	ug/L	91.4	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Barium	3.78	ug/L	4	ug/L	94.4	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
	Beryllium	.501	ug/L	.5	ug/L	100.2	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Cadmium	.973	ug/L	1	ug/L	97.3	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Calcium	217	ug/L	200	ug/L	108.7	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Chromium	9.54	ug/L	10	ug/L	95.4	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Cobalt	.969	ug/L	1	ug/L	96.9	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Copper	1.95	ug/L	2	ug/L	97.3	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Lead	2.01	ug/L	2	ug/L	100.5	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Magnesium	28.1	ug/L	30	ug/L	93.8	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Manganese	4.68	ug/L	5	ug/L	93.5	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Molybdenum	1	ug/L	1	ug/L	100.4	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Nickel	1.89	ug/L	2	ug/L	94.3	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Potassium	282	ug/L	300	ug/L	93.9	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Selenium	4.86	ug/L	5	ug/L	97.2	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Silver	1.01	ug/L	1	ug/L	100.9	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Sodium	247	ug/L	250	ug/L	98.8	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Thallium	1.86	ug/L	2	ug/L	93	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Thorium	2.11	ug/L	2	ug/L	105.7	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Vanadium	19	ug/L	20	ug/L	94.9	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Zinc	19.9	ug/L	20	ug/L	99.5	80.0 − 120.0	MS	05−MAY−21 18:21	210505−6
	Uranium−235	.0015	ug/L	.0014	ug/L	107.1	80.0 − 120.0	MS	06−MAY−21 10:56	210506−7
	Uranium−238	.2	ug/L	.2	ug/L	99.9	80.0 − 120.0	MS	06−MAY−21 10:56	210506−7
	Calcium	236	ug/L	200	ug/L	118.2	80.0 − 120.0	MS	06−MAY−21 14:04	210506−9
	Magnesium	31.3	ug/L	30	ug/L	104.5	80.0 − 120.0	MS	06−MAY−21 14:04	210506−9
	Sodium	260	ug/L	250	ug/L	104.1	80.0 − 120.0	MS	06−MAY−21 14:04	210506−9
	Iron	105	ug/L	100	ug/L	105.5	80.0 − 120.0	MS	07−MAY−21 07:25	210506−15

***Analytical Methods:**
MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	30−APR−21 10:09	210430−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	30−APR−21 10:09	210430−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	30−APR−21 16:53	210430−4
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	30−APR−21 16:53	210430−4
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	30−APR−21 16:53	210430−4
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	30−APR−21 16:53	210430−4
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	30−APR−21 16:53	210430−4
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	30−APR−21 16:53	210430−4
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	30−APR−21 16:53	210430−4
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	30−APR−21 16:53	210430−4
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	30−APR−21 16:53	210430−4
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	30−APR−21 16:53	210430−4
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	30−APR−21 16:53	210430−4
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	30−APR−21 16:53	210430−4
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	30−APR−21 16:53	210430−4
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	30−APR−21 16:53	210430−4
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	30−APR−21 16:53	210430−4
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	30−APR−21 16:53	210430−4
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	30−APR−21 16:53	210430−4
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	03−MAY−21 12:25	210503−5
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	03−MAY−21 12:25	210503−5
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:18	210505−6

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	05−MAY−21 18:18	210505−6
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	05−MAY−21 18:18	210505−6
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	05−MAY−21 18:18	210505−6
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	05−MAY−21 18:18	210505−6
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	05−MAY−21 18:18	210505−6
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	06−MAY−21 10:54	210506−7
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	06−MAY−21 10:54	210506−7
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	06−MAY−21 14:01	210506−9
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	06−MAY−21 14:01	210506−9
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	06−MAY−21 14:01	210506−9
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	07−MAY−21 07:23	210506−15
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 10:18	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 10:18	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 17:11	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 17:11	210430−4

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:11	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 17:11	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 17:11	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 17:11	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 17:11	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 17:11	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 17:11	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 17:11	210430−4
	Molybdenum	1.52	+/−1		0.2	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 17:11	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:11	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:11	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 17:11	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 17:11	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:11	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:11	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 12:35	210503−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 12:35	210503−5
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 18:36	210505−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 18:36	210505−6

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Molybdenum	0.717	+/−1	J	0.2	1.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 18:36	210505−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 18:36	210505−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 18:36	210505−6
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	06−MAY−21 11:03	210506−7
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	06−MAY−21 11:03	210506−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	06−MAY−21 14:19	210506−9
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	06−MAY−21 14:19	210506−9
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	06−MAY−21 14:19	210506−9
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	07−MAY−21 07:32	210506−15
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 12:39	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 12:39	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 17:22	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 17:22	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:22	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 17:22	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 17:22	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:22	210430−4

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 17:22	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 17:22	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 17:22	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 17:22	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 17:22	210430−4
	Molybdenum	0.703	+/−1	J	0.2	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 17:22	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 17:22	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 17:22	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 17:22	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Thorium	0.738	+/−2	J	0.7	2.0	LIQ	MS	30−APR−21 17:22	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:22	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 17:22	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 12:41	210503−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 12:41	210503−5
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 18:46	210505−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 18:46	210505−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 18:46	210505−6

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Molybdenum	0.545	+/−1	J	0.2	1.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 18:46	210505−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 18:46	210505−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Thorium	0.708	+/−2	J	0.7	2.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 18:46	210505−6
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	06−MAY−21 11:41	210506−7
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	06−MAY−21 11:41	210506−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	06−MAY−21 14:30	210506−9
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	06−MAY−21 14:30	210506−9
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	06−MAY−21 14:30	210506−9
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	07−MAY−21 07:51	210506−15
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 12:59	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 12:59	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 21:06	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 21:06	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 21:06	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 21:06	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 21:06	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 21:06	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 21:06	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 21:06	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 21:06	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 21:06	210430−4

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 21:06	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 21:06	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 21:06	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 21:06	210430−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 21:06	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 21:06	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 21:06	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 21:06	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 21:06	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 21:06	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 21:06	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 21:06	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 21:06	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 21:06	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 13:16	210503−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 13:16	210503−5
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 19:59	210505−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 19:59	210505−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 19:59	210505−6

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 19:59	210505−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 19:59	210505−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 19:59	210505−6
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	06−MAY−21 11:58	210506−7
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	06−MAY−21 11:58	210506−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	06−MAY−21 15:06	210506−9
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	06−MAY−21 15:06	210506−9
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	06−MAY−21 15:06	210506−9
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	07−MAY−21 08:08	210506−15
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	30−APR−21 13:18	210430−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	30−APR−21 13:18	210430−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 21:46	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 21:46	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 21:46	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 21:46	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 21:46	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 21:46	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 21:46	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 21:46	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 21:46	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 21:46	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 21:46	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 21:46	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 21:46	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 21:46	210430−4

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 21:46	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 21:46	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 21:46	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 21:46	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 21:46	210430−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	30−APR−21 21:46	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 21:46	210430−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 21:46	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 21:46	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 21:46	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	03−MAY−21 13:38	210503−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	03−MAY−21 13:38	210503−5
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 20:35	210505−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 20:35	210505−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 20:35	210505−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 20:35	210505−6

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 20:35	210505−6
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	06−MAY−21 12:16	210506−7
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	06−MAY−21 12:16	210506−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	06−MAY−21 15:42	210506−9
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	06−MAY−21 15:42	210506−9
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	06−MAY−21 15:42	210506−9
CCB05										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	30−APR−21 22:19	210430−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	30−APR−21 22:19	210430−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 22:19	210430−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	30−APR−21 22:19	210430−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	30−APR−21 22:19	210430−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 22:19	210430−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	30−APR−21 22:19	210430−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	30−APR−21 22:19	210430−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 22:19	210430−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	30−APR−21 22:19	210430−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	30−APR−21 22:19	210430−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	30−APR−21 22:19	210430−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	30−APR−21 22:19	210430−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	30−APR−21 22:19	210430−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	30−APR−21 22:19	210430−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 22:19	210430−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	30−APR−21 22:19	210430−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	30−APR−21 22:19	210430−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	30−APR−21 22:19	210430−4
	Sodium	138	+/−250	J	80.0	250	LIQ	MS	30−APR−21 22:19	210430−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	30−APR−21 22:19	210430−4

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	30−APR−21 22:19	210430−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 22:19	210430−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	30−APR−21 22:19	210430−4
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	05−MAY−21 21:11	210505−6
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	05−MAY−21 21:11	210505−6
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	05−MAY−21 21:11	210505−6
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	05−MAY−21 21:11	210505−6
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	05−MAY−21 21:11	210505−6
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	06−MAY−21 16:33	210506−9
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	06−MAY−21 16:33	210506−9
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	06−MAY−21 16:33	210506−9

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 540452

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run

SW846

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 540452
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204793794								
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
1204793807								
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 540452

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−4−
Interference Check Sample

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0002	ug/L					30−APR−21 10:13	210430−1
	Uranium−238	0.02	ug/L					30−APR−21 10:13	210430−1
ICSAB01									
	Uranium−235	0.133	ug/L	.145	ug/L	91.7	80.0 − 120.0	30−APR−21 10:15	210430−1
	Uranium−238	19.1	ug/L	19.86	ug/L	96.1	80.0 − 120.0	30−APR−21 10:15	210430−1

METALS
−4−
Interference Check Sample

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Iron	82200	ug/L	100000	ug/L	82.2	80.0 − 120.0	07−MAY−21 07:27	210506−15
ICSAB01									
	Iron	82100	ug/L	100000	ug/L	82.1	80.0 − 120.0	07−MAY−21 07:29	210506−15

METALS
−4−
Interference Check Sample

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	91900	ug/L	100000	ug/L	92	80.0 − 120.0	30−APR−21 17:01	210430−4
	Antimony	0.048	ug/L					30−APR−21 17:01	210430−4
	Arsenic	0.08	ug/L					30−APR−21 17:01	210430−4
	Barium	2.64	ug/L					30−APR−21 17:01	210430−4
	Beryllium	0.004	ug/L					30−APR−21 17:01	210430−4
	Cadmium	0.763	ug/L					30−APR−21 17:01	210430−4
	Calcium	94800	ug/L	100000	ug/L	94.8	80.0 − 120.0	30−APR−21 17:01	210430−4
	Chromium	0.855	ug/L					30−APR−21 17:01	210430−4
	Cobalt	0.485	ug/L					30−APR−21 17:01	210430−4
	Copper	0.164	ug/L					30−APR−21 17:01	210430−4
	Iron	82500	ug/L	100000	ug/L	82.5	80.0 − 120.0	30−APR−21 17:01	210430−4
	Lead	0.184	ug/L					30−APR−21 17:01	210430−4
	Magnesium	89800	ug/L	100000	ug/L	89.8	80.0 − 120.0	30−APR−21 17:01	210430−4
	Manganese	6.7	ug/L					30−APR−21 17:01	210430−4
	Molybdenum	2060	ug/L	2000	ug/L	103	80.0 − 120.0	30−APR−21 17:01	210430−4
	Nickel	0.426	ug/L					30−APR−21 17:01	210430−4
	Potassium	92900	ug/L	100000	ug/L	92.9	80.0 − 120.0	30−APR−21 17:01	210430−4
	Selenium	0.281	ug/L					30−APR−21 17:01	210430−4
	Silver	0.121	ug/L					30−APR−21 17:01	210430−4
	Sodium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	30−APR−21 17:01	210430−4
	Thallium	−0.077	ug/L					30−APR−21 17:01	210430−4
	Thorium	1.63	ug/L					30−APR−21 17:01	210430−4
	Vanadium	0.004	ug/L					30−APR−21 17:01	210430−4
	Zinc	2.38	ug/L					30−APR−21 17:01	210430−4
ICSAB01									
	Aluminum	91700	ug/L	100000	ug/L	91.7	80.0 − 120.0	30−APR−21 17:04	210430−4
	Antimony	19.8	ug/L	20	ug/L	99.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Arsenic	20.9	ug/L	20	ug/L	104	80.0 − 120.0	30−APR−21 17:04	210430−4
	Barium	22.2	ug/L	22.35	ug/L	99.2	80.0 − 120.0	30−APR−21 17:04	210430−4
	Beryllium	18.8	ug/L	20	ug/L	94.1	80.0 − 120.0	30−APR−21 17:04	210430−4

METALS
−4−
Interference Check Sample

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cadmium	20.0	ug/L	20.72	ug/L	96.5	80.0 − 120.0	30−APR−21 17:04	210430−4
	Calcium	94000	ug/L	100000	ug/L	94	80.0 − 120.0	30−APR−21 17:04	210430−4
	Chromium	20.6	ug/L	20	ug/L	103	80.0 − 120.0	30−APR−21 17:04	210430−4
	Cobalt	19.9	ug/L	20.65	ug/L	96.4	80.0 − 120.0	30−APR−21 17:04	210430−4
	Copper	17.8	ug/L	20	ug/L	89	80.0 − 120.0	30−APR−21 17:04	210430−4
	Iron	82600	ug/L	100000	ug/L	82.6	80.0 − 120.0	30−APR−21 17:04	210430−4
	Lead	18.8	ug/L	20	ug/L	94.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Magnesium	90400	ug/L	100000	ug/L	90.4	80.0 − 120.0	30−APR−21 17:04	210430−4
	Manganese	25.8	ug/L	25.72	ug/L	100	80.0 − 120.0	30−APR−21 17:04	210430−4
	Molybdenum	2060	ug/L	2000	ug/L	103	80.0 − 120.0	30−APR−21 17:04	210430−4
	Nickel	18.8	ug/L	20	ug/L	93.8	80.0 − 120.0	30−APR−21 17:04	210430−4
	Potassium	93700	ug/L	100000	ug/L	93.7	80.0 − 120.0	30−APR−21 17:04	210430−4
	Selenium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	30−APR−21 17:04	210430−4
	Silver	18.4	ug/L	20	ug/L	92.1	80.0 − 120.0	30−APR−21 17:04	210430−4
	Sodium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	30−APR−21 17:04	210430−4
	Thallium	17.9	ug/L	20	ug/L	89.3	80.0 − 120.0	30−APR−21 17:04	210430−4
	Thorium	21.2	ug/L	20	ug/L	106	80.0 − 120.0	30−APR−21 17:04	210430−4
	Vanadium	20.1	ug/L	20	ug/L	100	80.0 − 120.0	30−APR−21 17:04	210430−4
	Zinc	20.9	ug/L	20	ug/L	104	80.0 − 120.0	30−APR−21 17:04	210430−4

METALS
−4−
Interference Check Sample

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Manganese	5.84	ug/L					03−MAY−21 12:29	210503−5
	Sodium	99200	ug/L	100000	ug/L	99.2	80.0 − 120.0	03−MAY−21 12:29	210503−5
ICSAB01									
	Manganese	25.4	ug/L	25.72	ug/L	98.9	80.0 − 120.0	03−MAY−21 12:31	210503−5
	Sodium	99100	ug/L	100000	ug/L	99.1	80.0 − 120.0	03−MAY−21 12:31	210503−5

METALS
−4−
Interference Check Sample

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	86300	ug/L	100000	ug/L	86.3	80.0 − 120.0	05−MAY−21 18:25	210505−6
	Antimony	0.052	ug/L					05−MAY−21 18:25	210505−6
	Arsenic	0.129	ug/L					05−MAY−21 18:25	210505−6
	Barium	2.45	ug/L					05−MAY−21 18:25	210505−6
	Beryllium	0.017	ug/L					05−MAY−21 18:25	210505−6
	Cadmium	0.961	ug/L					05−MAY−21 18:25	210505−6
	Calcium	92800	ug/L	100000	ug/L	92.8	80.0 − 120.0	05−MAY−21 18:25	210505−6
	Chromium	0.793	ug/L					05−MAY−21 18:25	210505−6
	Cobalt	0.469	ug/L					05−MAY−21 18:25	210505−6
	Copper	0.193	ug/L					05−MAY−21 18:25	210505−6
	Lead	0.228	ug/L					05−MAY−21 18:25	210505−6
	Magnesium	84200	ug/L	100000	ug/L	84.2	80.0 − 120.0	05−MAY−21 18:25	210505−6
	Manganese	5.64	ug/L					05−MAY−21 18:25	210505−6
	Molybdenum	1950	ug/L	2000	ug/L	97.4	80.0 − 120.0	05−MAY−21 18:25	210505−6
	Nickel	0.393	ug/L					05−MAY−21 18:25	210505−6
	Potassium	87700	ug/L	100000	ug/L	87.7	80.0 − 120.0	05−MAY−21 18:25	210505−6
	Selenium	0.073	ug/L					05−MAY−21 18:25	210505−6
	Silver	0.143	ug/L					05−MAY−21 18:25	210505−6
	Sodium	94300	ug/L	100000	ug/L	94.3	80.0 − 120.0	05−MAY−21 18:25	210505−6
	Thallium	0.043	ug/L					05−MAY−21 18:25	210505−6
	Thorium	1.55	ug/L					05−MAY−21 18:25	210505−6
	Vanadium	0.009	ug/L					05−MAY−21 18:25	210505−6
	Zinc	3.72	ug/L					05−MAY−21 18:25	210505−6
ICSAB01									
	Aluminum	88000	ug/L	100000	ug/L	88	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Antimony	19.7	ug/L	20	ug/L	98.3	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Arsenic	20.2	ug/L	20	ug/L	101	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Barium	20.8	ug/L	22.35	ug/L	93.1	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Beryllium	18.0	ug/L	20	ug/L	90.1	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Cadmium	19.9	ug/L	20.72	ug/L	96	80.0 − 120.0	05−MAY−21 18:28	210505−6

METALS
−4−
Interference Check Sample

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Calcium	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Chromium	19.5	ug/L	20	ug/L	97.2	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Cobalt	18.5	ug/L	20.65	ug/L	89.7	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Copper	17.0	ug/L	20	ug/L	84.9	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Lead	18.8	ug/L	20	ug/L	93.8	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Magnesium	85700	ug/L	100000	ug/L	85.7	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Manganese	24.2	ug/L	25.72	ug/L	93.9	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Molybdenum	1970	ug/L	2000	ug/L	98.6	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Nickel	17.7	ug/L	20	ug/L	88.5	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Potassium	89200	ug/L	100000	ug/L	89.2	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Selenium	21.4	ug/L	20	ug/L	107	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Silver	18.6	ug/L	20	ug/L	93.1	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Sodium	95800	ug/L	100000	ug/L	95.8	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Thallium	18.3	ug/L	20	ug/L	91.5	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Thorium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Vanadium	19.0	ug/L	20	ug/L	94.9	80.0 − 120.0	05−MAY−21 18:28	210505−6
	Zinc	21.7	ug/L	20	ug/L	109	80.0 − 120.0	05−MAY−21 18:28	210505−6

METALS
−4−
Interference Check Sample

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					06−MAY−21 10:58	210506−7
	Uranium−238	0.022	ug/L					06−MAY−21 10:58	210506−7
ICSAB01									
	Uranium−235	0.139	ug/L	.145	ug/L	95.7	80.0 − 120.0	06−MAY−21 10:59	210506−7
	Uranium−238	19.0	ug/L	19.86	ug/L	95.6	80.0 − 120.0	06−MAY−21 10:59	210506−7

METALS
−4−
Interference Check Sample

SDG No: 540452

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	93400	ug/L	100000	ug/L	93.4	80.0 − 120.0	06−MAY−21 14:08	210506−9
	Magnesium	92100	ug/L	100000	ug/L	92.1	80.0 − 120.0	06−MAY−21 14:08	210506−9
	Sodium	96500	ug/L	100000	ug/L	96.5	80.0 − 120.0	06−MAY−21 14:08	210506−9
ICSAB01									
	Calcium	93600	ug/L	100000	ug/L	93.6	80.0 − 120.0	06−MAY−21 14:11	210506−9
	Magnesium	93700	ug/L	100000	ug/L	93.8	80.0 − 120.0	06−MAY−21 14:11	210506−9
	Sodium	97900	ug/L	100000	ug/L	97.9	80.0 − 120.0	06−MAY−21 14:11	210506−9

METALS
−5a−

Matrix Spike Summary

SDG NO. 540452 **Client ID** HA−11−04072021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540452017 **Spike ID:** 1204793796

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2080		184		2000	94.9		MS
Antimony	ug/L	75−125	48.7		1.00	U	50.0	97.2		MS
Arsenic	ug/L	75−125	86.8		37.4		50.0	98.8		MS
Barium	ug/L	75−125	60.9		10.8		50.0	100		MS
Beryllium	ug/L	75−125	51.9		0.200	U	50.0	104		MS
Cadmium	ug/L	75−125	49.3		0.300	U	50.0	98.5		MS
Calcium	ug/L	75−125	4750		2840		2000	95.8		MS
Chromium	ug/L	75−125	45.9		3.00	U	50.0	90.5		MS
Cobalt	ug/L	75−125	45.9		1.07		50.0	89.7		MS
Copper	ug/L	75−125	47.0		1.69	J	50.0	90.7		MS
Iron	ug/L		22200		19000		2000	161	N/A	MS
Lead	ug/L	75−125	50.7		0.500	U	50.0	101		MS
Magnesium	ug/L	75−125	2450		535		2000	95.7		MS
Manganese	ug/L	75−125	93.0		48.0		50.0	89.9		MS
Molybdenum	ug/L	75−125	51.0		1.30		50.0	99.4		MS
Nickel	ug/L	75−125	45.9		0.959	J	50.0	89.9		MS
Potassium	ug/L	75−125	2550		655		2000	94.6		MS
Selenium	ug/L	75−125	49.7		2.00	U	50.0	99		MS
Silver	ug/L	75−125	50.9		0.300	U	50.0	102		MS
Sodium	ug/L	75−125	4660		2760		2000	95		MS
Thallium	ug/L	75−125	49.6		0.600	U	50.0	99.2		MS
Thorium	ug/L	75−125	48.4		0.700	U	50.0	96.4		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 540452 **Client ID** HA−11−04072021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540452017 **Spike ID:** 1204793796

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.357		0.0100	U	0.360	99		MS
Uranium−238	ug/L	75−125	49.4		0.0808	J	49.6	99.3		MS
Vanadium	ug/L	75−125	48.1		3.30	U	50.0	91.4		MS
Zinc	ug/L	75−125	55.8		11.1	J	50.0	89.4		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 540452 **Client ID** HA−11−04072021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540452017 **Spike ID:** 1204793797

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2100		184		2000	95.8		MS
Antimony	ug/L	75−125	50.2		1.00	U	50.0	100		MS
Arsenic	ug/L	75−125	93.0		37.4		50.0	111		MS
Barium	ug/L	75−125	61.9		10.8		50.0	102		MS
Beryllium	ug/L	75−125	51.3		0.200	U	50.0	103		MS
Cadmium	ug/L	75−125	50.4		0.300	U	50.0	101		MS
Calcium	ug/L	75−125	4680		2840		2000	92.1		MS
Chromium	ug/L	75−125	45.3		3.00	U	50.0	89.2		MS
Cobalt	ug/L	75−125	45.6		1.07		50.0	89.1		MS
Copper	ug/L	75−125	46.4		1.69	J	50.0	89.4		MS
Iron	ug/L		23300		19000		2000	216	N/A	MS
Lead	ug/L	75−125	52.1		0.500	U	50.0	103		MS
Magnesium	ug/L	75−125	2400		535		2000	93.5		MS
Manganese	ug/L	75−125	90.9		48.0		50.0	85.7		MS
Molybdenum	ug/L	75−125	53.0		1.30		50.0	103		MS
Nickel	ug/L	75−125	45.2		0.959	J	50.0	88.5		MS
Potassium	ug/L	75−125	2510		655		2000	92.9		MS
Selenium	ug/L	75−125	49.7		2.00	U	50.0	98.8		MS
Silver	ug/L	75−125	52.4		0.300	U	50.0	105		MS
Sodium	ug/L	75−125	4550		2760		2000	89.6		MS
Thallium	ug/L	75−125	51.6		0.600	U	50.0	103		MS
Thorium	ug/L	75−125	49.7		0.700	U	50.0	99.1		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 540452 **Client ID** HA−11−04072021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540452017 **Spike ID:** 1204793797

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.372		0.0100	U	0.360	103		MS
Uranium−238	ug/L	75−125	51.1		0.0808	J	49.6	103		MS
Vanadium	ug/L	75−125	47.4		3.30	U	50.0	90.1		MS
Zinc	ug/L	75−125	57.2		11.1	J	50.0	92.2		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Summary

SDG NO. 540452 **Client ID** HA−11−04072021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540452018 **Spike ID:** 1204793809

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Vanadium	ug/L	75−125	47.6		3.30	U	50.0	93.6		MS
Zinc	ug/L	75−125	52.6		3.89	J	50.0	97.5		MS
Antimony	ug/L	75−125	52.6		1.00	U	50.0	105		MS
Arsenic	ug/L	75−125	50.3		2.00	U	50.0	98.6		MS
Barium	ug/L	75−125	62.8		9.11		50.0	107		MS
Beryllium	ug/L	75−125	54.0		0.200	U	50.0	108		MS
Cadmium	ug/L	75−125	52.6		0.300	U	50.0	105		MS
Calcium	ug/L	75−125	4100		2070		2000	101		MS
Chromium	ug/L	75−125	47.1		3.00	U	50.0	93.9		MS
Cobalt	ug/L	75−125	47.2		0.541	J	50.0	93.3		MS
Copper	ug/L	75−125	47.4		2.52		50.0	89.8		MS
Iron	ug/L	75−125	2000		156		2000	92.2		MS
Aluminum	ug/L	75−125	1930		19.3	U	2000	96.3		MS
Lead	ug/L	75−125	51.8		0.500	U	50.0	103		MS
Magnesium	ug/L	75−125	2500		504		2000	99.9		MS
Manganese	ug/L	75−125	76.4		29.6		50.0	93.6		MS
Molybdenum	ug/L	75−125	53.3		0.200	U	50.0	107		MS
Nickel	ug/L	75−125	47.4		0.641	J	50.0	93.6		MS
Potassium	ug/L	75−125	2530		599		2000	96.5		MS
Selenium	ug/L	75−125	51.4		2.00	U	50.0	103		MS
Silver	ug/L	75−125	53.0		0.300	U	50.0	106		MS
Sodium	ug/L	75−125	4850		2730		2000	106		MS

METALS
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Matrix Spike Summary

SDG NO.	540452	**Client ID**	HA−11−04072021S
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	540452018	**Spike ID:**	1204793809

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Thallium	ug/L	75−125	49.4		0.600	U	50.0	98.9		MS
Thorium	ug/L	75−125	51.6		0.700	U	50.0	103		MS
Uranium−235	ug/L	75−125	0.370		0.0100	U	0.360	103		MS
Uranium−238	ug/L	75−125	50.5		0.0670	U	49.6	102		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 540452 **Client ID** HA−11−04072021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540452018 **Spike ID:** 1204793810

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	1930		19.3	U	2000	96.1		MS
Antimony	ug/L	75−125	51.8		1.00	U	50.0	104		MS
Arsenic	ug/L	75−125	50.7		2.00	U	50.0	99.3		MS
Barium	ug/L	75−125	61.8		9.11		50.0	105		MS
Beryllium	ug/L	75−125	53.5		0.200	U	50.0	107		MS
Cadmium	ug/L	75−125	52.4		0.300	U	50.0	105		MS
Calcium	ug/L	75−125	4060		2070		2000	99.5		MS
Chromium	ug/L	75−125	46.4		3.00	U	50.0	92.4		MS
Cobalt	ug/L	75−125	47.4		0.541	J	50.0	93.7		MS
Copper	ug/L	75−125	47.0		2.52		50.0	89		MS
Iron	ug/L	75−125	2000		156		2000	92.1		MS
Lead	ug/L	75−125	52.2		0.500	U	50.0	104		MS
Magnesium	ug/L	75−125	2490		504		2000	99.2		MS
Manganese	ug/L	75−125	76.0		29.6		50.0	93		MS
Molybdenum	ug/L	75−125	53.2		0.200	U	50.0	106		MS
Nickel	ug/L	75−125	47.3		0.641	J	50.0	93.4		MS
Potassium	ug/L	75−125	2500		599		2000	94.9		MS
Selenium	ug/L	75−125	49.7		2.00	U	50.0	99.3		MS
Silver	ug/L	75−125	53.0		0.300	U	50.0	106		MS
Sodium	ug/L	75−125	4860		2730		2000	107		MS
Thallium	ug/L	75−125	49.6		0.600	U	50.0	99.1		MS
Thorium	ug/L	75−125	52.1		0.700	U	50.0	104		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 540452 **Client ID** HA−11−04072021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 540452018 **Spike ID:** 1204793810

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.358		0.0100	U	0.360	99.5		MS
Uranium−238	ug/L	75−125	50.4		0.0670	U	49.6	101		MS
Vanadium	ug/L	75−125	46.9		3.30	U	50.0	92.3		MS
Zinc	ug/L	75−125	52.6		3.89	J	50.0	97.3		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 540452 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA−11−04072021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793796 **Duplicate ID:** 1204793797 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2080		2100		.888		MS
Antimony	ug/L	+/−20	48.7		50.2		3.13		MS
Arsenic	ug/L	+/−20	86.8		93.0		6.88		MS
Barium	ug/L	+/−20	60.9		61.9		1.59		MS
Beryllium	ug/L	+/−20	51.9		51.3		1.1		MS
Cadmium	ug/L	+/−20	49.3		50.4		2.2		MS
Calcium	ug/L	+/−20	4750		4680		1.56		MS
Chromium	ug/L	+/−20	45.9		45.3		1.37		MS
Cobalt	ug/L	+/−20	45.9		45.6		.669		MS
Copper	ug/L	+/−20	47.0		46.4		1.34		MS
Iron	ug/L	+/−20	22200		23300		4.88		MS
Lead	ug/L	+/−20	50.7		52.1		2.72		MS
Magnesium	ug/L	+/−20	2450		2400		1.87		MS
Manganese	ug/L	+/−20	93.0		90.9		2.3		MS
Molybdenum	ug/L	+/−20	51.0		53.0		3.78		MS
Nickel	ug/L	+/−20	45.9		45.2		1.57		MS
Potassium	ug/L	+/−20	2550		2510		1.42		MS
Selenium	ug/L	+/−20	49.7		49.7		.113		MS
Silver	ug/L	+/−20	50.9		52.4		2.92		MS
Sodium	ug/L	+/−20	4660		4550		2.33		MS
Thallium	ug/L	+/−20	49.6		51.6		3.88		MS
Thorium	ug/L	+/−20	48.4		49.7		2.7		MS
Uranium−235	ug/L	+/−20	0.357		0.372		4.14		MS
Uranium−238	ug/L	+/−20	49.4		51.1		3.5		MS
Vanadium	ug/L	+/−20	48.1		47.4		1.34		MS
Zinc	ug/L	+/−20	55.8		57.2		2.46		MS

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Metals
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Duplicate Sample Summary

SDG No.: 540452 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA−11−04072021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793796 **Duplicate ID:** 1204793797 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

Metals
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Duplicate Sample Summary

SDG No.: 540452 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA−11−04072021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793809 **Duplicate ID:** 1204793810 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1930		1930		.162		MS
Antimony	ug/L	+/−20	52.6		51.8		1.45		MS
Arsenic	ug/L	+/−20	50.3		50.7		.695		MS
Barium	ug/L	+/−20	62.8		61.8		1.62		MS
Beryllium	ug/L	+/−20	54.0		53.5		.921		MS
Cadmium	ug/L	+/−20	52.6		52.4		.352		MS
Calcium	ug/L	+/−20	4100		4060		.884		MS
Chromium	ug/L	+/−20	47.1		46.4		1.52		MS
Cobalt	ug/L	+/−20	47.2		47.4		.429		MS
Copper	ug/L	+/−20	47.4		47.0		.83		MS
Iron	ug/L	+/−20	2000		2000		.126		MS
Lead	ug/L	+/−20	51.8		52.2		.679		MS
Magnesium	ug/L	+/−20	2500		2490		.539		MS
Manganese	ug/L	+/−20	76.4		76.0		.44		MS
Molybdenum	ug/L	+/−20	53.3		53.2		.254		MS
Nickel	ug/L	+/−20	47.4		47.3		.253		MS
Potassium	ug/L	+/−20	2530		2500		1.33		MS
Selenium	ug/L	+/−20	51.4		49.7		3.51		MS
Silver	ug/L	+/−20	53.0		53.0		.0453		MS
Sodium	ug/L	+/−20	4850		4860		.289		MS
Thallium	ug/L	+/−20	49.4		49.6		.242		MS
Thorium	ug/L	+/−20	51.6		52.1		1.01		MS
Uranium−235	ug/L	+/−20	0.370		0.358		3.16		MS
Uranium−238	ug/L	+/−20	50.5		50.4		.195		MS
Vanadium	ug/L	+/−20	47.6		46.9		1.4		MS
Zinc	ug/L	+/−20	52.6		52.6		.143		MS

Metals
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Duplicate Sample Summary

SDG No.: 540452 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA−11−04072021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204793809 **Duplicate ID:** 1204793810 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

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Laboratory Control Sample Summary

SDG NO. 540452

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204793795								
	Aluminum	ug/L	2000	1850		92.5	80−120	MS
	Antimony	ug/L	50.0	47.6		95.3	80−120	MS
	Arsenic	ug/L	50.0	46.4		92.8	80−120	MS
	Barium	ug/L	50.0	48.4		96.8	80−120	MS
	Beryllium	ug/L	50.0	50.2		100	80−120	MS
	Cadmium	ug/L	50.0	47.9		95.8	80−120	MS
	Calcium	ug/L	2000	1910		95.7	80−120	MS
	Chromium	ug/L	50.0	45.4		90.8	80−120	MS
	Cobalt	ug/L	50.0	45.5		91.1	80−120	MS
	Copper	ug/L	50.0	45.5		91	80−120	MS
	Iron	ug/L	2000	2000		100	80−120	MS
	Lead	ug/L	50.0	50.2		100	80−120	MS
	Magnesium	ug/L	2000	1880		93.8	80−120	MS
	Manganese	ug/L	50.0	44.7		89.5	80−120	MS
	Molybdenum	ug/L	50.0	49.0		98	80−120	MS
	Nickel	ug/L	50.0	45.2		90.4	80−120	MS
	Potassium	ug/L	2000	1850		92.6	80−120	MS
	Selenium	ug/L	50.0	48.6		97.1	80−120	MS
	Silver	ug/L	50.0	50.0		99.9	80−120	MS
	Sodium	ug/L	2000	2010		100	80−120	MS
	Thallium	ug/L	50.0	49.2		98.4	80−120	MS
	Thorium	ug/L	50.0	48.4		96.9	80−120	MS
	Uranium−235	ug/L	0.360	0.350		97.1	80−120	MS
	Uranium−238	ug/L	49.6	48.8		98.4	80−120	MS
	Vanadium	ug/L	50.0	45.9		91.7	80−120	MS
	Zinc	ug/L	50.0	47.3		94.6	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

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Laboratory Control Sample Summary

SDG NO. 540452

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204793808								
	Arsenic	ug/L	50.0	48.5		97.1	80−120	MS
	Barium	ug/L	50.0	51.0		102	80−120	MS
	Beryllium	ug/L	50.0	53.2		106	80−120	MS
	Cadmium	ug/L	50.0	50.6		101	80−120	MS
	Calcium	ug/L	2000	1940		97.2	80−120	MS
	Chromium	ug/L	50.0	46.6		93.3	80−120	MS
	Cobalt	ug/L	50.0	46.2		92.4	80−120	MS
	Copper	ug/L	50.0	47.2		94.5	80−120	MS
	Iron	ug/L	2000	1840		91.9	80−120	MS
	Lead	ug/L	50.0	50.0		100	80−120	MS
	Magnesium	ug/L	2000	1940		96.9	80−120	MS
	Manganese	ug/L	50.0	45.6		91.2	80−120	MS
	Molybdenum	ug/L	50.0	51.0		102	80−120	MS
	Nickel	ug/L	50.0	46.4		92.8	80−120	MS
	Potassium	ug/L	2000	1890		94.5	80−120	MS
	Selenium	ug/L	50.0	49.5		99.1	80−120	MS
	Silver	ug/L	50.0	51.0		102	80−120	MS
	Sodium	ug/L	2000	2030		102	80−120	MS
	Thallium	ug/L	50.0	48.3		96.6	80−120	MS
	Thorium	ug/L	50.0	49.4		98.7	80−120	MS
	Uranium−235	ug/L	0.360	0.347		96.4	80−120	MS
	Uranium−238	ug/L	49.6	47.9		96.6	80−120	MS
	Vanadium	ug/L	50.0	46.4		92.7	80−120	MS
	Zinc	ug/L	50.0	49.6		99.2	80−120	MS
	Antimony	ug/L	50.0	49.9		99.8	80−120	MS
	Aluminum	ug/L	2000	1900		95	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

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Serial Dilution Sample Summary

SDG NO. 540452 **Client ID** HA−11−04072021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540452017 **Serial Dilution ID:** 1204793798

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	184		173	J	5.967			MS
Antimony	1	U	5	U				MS
Arsenic	37.4		36.9		1.498			MS
Barium	10.8		10.9	J	1.286			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	2840		2650		6.495			MS
Chromium	3	U	15	U				MS
Cobalt	1.07		1.5	U	5.164			MS
Copper	1.69	J	1.67	J	.949			MS
Iron	1900		1850		2.304			MS
Lead	.5	U	2.5	U				MS
Magnesium	535		494		7.633			MS
Manganese	48		44.9		6.583			MS
Molybdenum	1.3		1.71	J	31.336			MS
Nickel	.959	J	3	U	15.016			MS
Potassium	655		587	J	10.461			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	2760		2540		7.941			MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.0808	J	.335	U	55.322			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	11.1	J	17.9	J	61.351			MS

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Serial Dilution Sample Summary

SDG NO.	540452	**Client ID**	HA−11−04072021L
Contract:	DMAX00801		
Matrix:	LIQUID	**Level:**	Low
Sample ID:	540452017	**Serial Dilution ID:**	1204793798

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

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Serial Dilution Sample Summary

SDG NO. 540452 **Client ID** HA−11−04072021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540452018 **Serial Dilution ID:** 1204793811

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	9.11		9.3	J	2.008			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	2070		1960		5.333			MS
Chromium	3	U	15	U				MS
Cobalt	.541	J	1.5	U	5.73			MS
Copper	2.52		2.26	J	10.424			MS
Iron	156		165	U	7.493			MS
Lead	.5	U	2.5	U				MS
Magnesium	504		469		6.882			MS
Manganese	29.6		28.2		4.766			MS
Molybdenum	.2	U	1	U				MS
Nickel	.641	J	3	U	9.516			MS
Potassium	599		540	J	9.816			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	2730		2540		6.828			MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.067	U	.335	U				MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.89	J	16.5	U	202.415			MS

METALS
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Serial Dilution Sample Summary

SDG NO. 540452 **Client ID** HA−11−04072021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 540452018 **Serial Dilution ID:** 1204793811

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

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SAMPLE PREPARATION SUMMARY

SDG No: 540452 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2114319							
1204793794	MB for batch 2114319	MB	G	14−APR−21	50mL	50mL	
1204793795	LCS for batch 2114319	LCS	G	14−APR−21	50mL	50mL	
1204793796	HA−11−04072021S	MS	G	14−APR−21	50mL	50mL	
1204793797	HA−11−04072021SD	MSD	G	14−APR−21	50mL	50mL	
540452001	MW−SD02−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
540452002	MW−SD02−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
540452003	MW−SM46−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
540452004	MW−SM46−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
540452005	MW−S32−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
540452006	MW−S32−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
540452007	MW−SD32−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
540452008	MW−SD32−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
540452009	MW−BS32−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
540452017	HA−11−04072021	SAMPLE	G	14−APR−21	50mL	50mL	
Batch Number 2114322							
1204793807	MB for batch 2114322	MB	G	13−APR−21	50mL	50mL	
1204793808	LCS for batch 2114322	LCS	G	13−APR−21	50mL	50mL	
1204793809	HA−11−04072021S	MS	G	13−APR−21	50mL	50mL	
1204793810	HA−11−04072021SD	MSD	G	13−APR−21	50mL	50mL	

SW846

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 540452 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
540452010	MW−BS32−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540452011	MW−S63−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540452012	MW−S63−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540452013	MW−BS14−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540452014	MW−BS14−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540452015	MW−SD24−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540452016	MW−SD24−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540452018	HA−11−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540452019	HA20−CMT1D1−04072021	SAMPLE	G	13−APR−21	50mL	50mL	
540452020	HA20−CMT1D1−04072021	SAMPLE	G	13−APR−21	50mL	50mL	

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL　　**Client Sdg:** 540452

Inst Name: ICPMS15　　**Instrument Type:** MS

Start Date: 30-APR-21　　**End Date:** 30-APR-21　　**Data File:** 210430-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	10:02:42																							X	X		
S10	1	10:04:28																							X	X		
S100	1	10:06:15																							X	X		
ICV01	1	10:08:01																							X	X		
ICB01	1	10:09:49																							X	X		
CRDL01	1	10:11:36																							X	X		
ICSA01	1	10:13:24																							X	X		
ICSAB01	1	10:15:13																							X	X		
CCV01	1	10:17:01																							X	X		
CCB01	1	10:18:48																							X	X		
ZZZZZZ	1	10:31:34																										
ZZZZZZ	1	10:33:21																										
ZZZZZZ	1	10:35:07																										
ZZZZZZ	1	10:36:54																										
ZZZZZZ	1	10:38:41																										
ZZZZZZ	1	10:40:28																										
ZZZZZZ	5	10:42:15																										
CCV	1	10:44:03																							X	X		
CCB	1	10:45:51																							X	X		
ZZZZZZ	1	10:47:39																										
ZZZZZZ	1	10:49:26																										
ZZZZZZ	1	10:51:13																										
ZZZZZZ	1	10:53:00																										
ZZZZZZ	1	10:54:46																										
ZZZZZZ	1	10:56:33																										
CCV	1	10:58:20																							X	X		
CCB	1	11:00:08																							X	X		
ZZZZZZ	1	11:01:55																										
ZZZZZZ	1	11:03:42																										
ZZZZZZ	1	11:05:29																										
ZZZZZZ	1	11:07:17																										
ZZZZZZ	1	11:09:04																										
ZZZZZZ	1	11:10:51																										
ZZZZZZ	2	11:12:38																										
CCV	1	11:14:26																							X	X		
CCB	1	11:16:13																							X	X		
ZZZZZZ	1	11:18:01																										
ZZZZZZ	2	11:22:51																										
ZZZZZZ	2	11:24:37																										
ZZZZZZ	1	11:26:25																										
ZZZZZZ	1	11:28:11																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540452

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 30-APR-21

End Date: 30-APR-21

Data File: 210430-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZZ	1	11:29:58																										
ZZZZZZZ	1	11:31:45																										
CCV	1	11:33:32																							X	X		
CCB	1	11:35:20																							X	X		
ZZZZZZZ	1	11:37:07																										
ZZZZZZZ	1	11:38:54																										
ZZZZZZZ	1	11:40:41																										
ZZZZZZZ	1	11:42:28																										
ZZZZZZZ	1	11:44:15																										
ZZZZZZZ	1	11:46:01																										
ZZZZZZZ	5	11:47:48																										
CCV	1	11:49:35																							X	X		
CCB	1	11:51:23																							X	X		
ZZZZZZZ	1	11:53:10																										
ZZZZZZZ	1	11:54:57																										
ZZZZZZZ	1	11:56:44																										
ZZZZZZZ	1	11:58:31																										
ZZZZZZZ	1	12:00:18																										
ZZZZZZZ	1	12:02:04																										
ZZZZZZZ	1	12:03:51																										
ZZZZZZZ	1	12:05:38																										
ZZZZZZZ	1	12:07:25																										
CCV	1	12:09:12																							X	X		
CCB	1	12:11:00																							X	X		
ZZZZZZZ	1	12:12:47																										
ZZZZZZZ	1	12:14:34																										
ZZZZZZZ	1	12:16:21																										
ZZZZZZZ	1	12:18:08																										
ZZZZZZZ	1	12:19:55																										
ZZZZZZZ	2	12:21:42																										
CCV	1	12:23:29																							X	X		
CCB	1	12:25:17																							X	X		
ZZZZZZZ	1	12:27:04																										
ZZZZZZZ	2	12:28:51																										
ZZZZZZZ	1	12:30:39																										
ZZZZZZZ	1	12:32:26																										
ZZZZZZZ	1	12:34:12																										
ZZZZZZZ	1	12:35:59																										
CCV02	1	12:37:47																							X	X		
CCB02	1	12:39:34																							X	X		
1204793807	1	12:41:22																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
1204793808	1	12:43:09																							X	X		
540452010	1	12:44:56																							X	X		
540452011	1	12:46:43																							X	X		
540452012	1	12:48:29																							X	X		
540452013	1	12:50:16																							X	X		
540452014	1	12:52:03																							X	X		
540452015	1	12:53:49																							X			
540452015	2	12:55:38																								X		
CCV03	1	12:57:25																							X	X		
CCB03	1	12:59:13																							X	X		
540452016	1	13:01:00																							X			
540452016	2	13:02:48																								X		
540452018	1	13:04:36																							X	X		
1204793809	1	13:06:23																							X	X		
1204793810	1	13:08:10																							X	X		
ZZZZZZ	1	13:09:56																										
1204793811	5	13:11:43																							X	X		
540452019	1	13:13:30																							X	X		
540452020	1	13:15:17																							X	X		
CCV04	1	13:17:04																							X	X		
CCB04	1	13:18:52																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	16:39:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	16:43:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	16:46:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	16:50:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	16:53:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	16:57:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	17:01:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	17:04:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	17:08:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	17:11:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	17:15:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	17:19:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	17:22:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	17:26:17																										
ZZZZZZ	1	17:29:54																										
ZZZZZZ	1	17:33:30																										
ZZZZZZ	1	17:37:07																										
ZZZZZZ	1	17:40:43																										
ZZZZZZ	1	17:44:20																										
ZZZZZZ	5	17:47:57																										
CCV	1	17:51:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	17:55:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	17:58:47																										
ZZZZZZ	1	18:02:24																										
ZZZZZZ	1	18:06:00																										
ZZZZZZ	1	18:09:37																										
ZZZZZZ	1	18:13:13																										
ZZZZZZ	1	18:16:50																										
ZZZZZZ	1	18:20:27																										
ZZZZZZ	1	18:24:03																										
CCV	1	18:27:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	18:31:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	18:34:56																										
ZZZZZZ	1	18:38:33																										
ZZZZZZ	1	18:42:09																										
ZZZZZZ	1	18:45:46																										
ZZZZZZ	1	18:49:23																										
ZZZZZZ	1	18:53:00																										
ZZZZZZ	1	18:56:36																										
ZZZZZZ	1	19:00:13																										
ZZZZZZ	1	19:03:50																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 540452

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 30-APR-21

End Date: 30-APR-21

Data File: 210430-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCV	1	19:07:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	19:11:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	19:14:44																										
ZZZZZZ	1	19:18:20																										
ZZZZZZ	1	19:21:57																										
ZZZZZZ	1	19:25:34																										
ZZZZZZ	1	19:29:11																										
ZZZZZZ	1	19:32:48																										
ZZZZZZ	5	19:36:24																										
CCV	1	19:40:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	19:43:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	19:47:18																										
ZZZZZZ	1	19:50:55																										
ZZZZZZ	1	19:54:32																										
ZZZZZZ	1	19:58:08																										
ZZZZZZ	1	20:01:45																										
ZZZZZZ	1	20:05:22																										
ZZZZZZ	1	20:08:58																										
ZZZZZZ	1	20:12:35																										
ZZZZZZ	1	20:16:12																										
CCV	1	20:19:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	20:23:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	20:27:06																										
ZZZZZZ	1	20:30:42																										
ZZZZZZ	1	20:34:19																										
ZZZZZZ	1	20:37:56																										
ZZZZZZ	1	20:41:33																										
ZZZZZZ	1	20:45:09																										
ZZZZZZ	1	20:48:46																										
ZZZZZZ	1	20:52:23																										
ZZZZZZ	1	20:56:00																										
ZZZZZZ	1	20:59:36																										
CCV03	1	21:03:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	21:06:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793807	1	21:10:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793808	1	21:14:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540452010	1	21:17:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540452011	1	21:21:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540452012	1	21:24:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540452013	1	21:28:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540452014	1	21:32:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 30-APR-21 **End Date:** 30-APR-21 **Data File:** 210430-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
540452015	1	21:35:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540452016	1	21:39:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	21:43:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	21:46:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540452018	1	21:50:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793809	1	21:53:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204793810	1	21:57:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	22:01:06																										
1204793811	5	22:04:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
540452019	1	22:08:19	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
540452020	1	22:11:56	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
CCV05	1	22:15:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	22:19:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 03-MAY-21 **End Date:** 03-MAY-21 **Data File:** 210503-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	12:18:02														X						X						
S10	1	12:19:59														X						X						
S100	1	12:21:55														X						X						
ICV01	1	12:23:51														X						X						
ICB01	1	12:25:48														X						X						
CRDL01	1	12:27:45														X						X						
ICSA01	1	12:29:41														X						X						
ICSAB01	1	12:31:38														X						X						
CCV01	1	12:33:35														X						X						
CCB01	1	12:35:32														X						X						
LR01	1	12:37:29														X						X						
CCV02	1	12:39:26														X						X						
CCB02	1	12:41:23														X						X						
ZZZZZZ	1	12:43:20																										
ZZZZZZ	1	12:45:17																										
ZZZZZZ	10	12:47:14																										
ZZZZZZ	10	12:49:10																										
ZZZZZZ	10	12:51:07																										
ZZZZZZ	10	12:53:04																										
ZZZZZZ	10	12:55:00																										
ZZZZZZ	10	12:56:57																										
CCV	1	12:58:54														X						X						
CCB	1	13:00:51														X						X						
ZZZZZZ	1	13:02:47																										
ZZZZZZ	1	13:04:44																										
ZZZZZZ	10	13:06:41																										
ZZZZZZ	10	13:08:37																										
ZZZZZZ	10	13:10:34																										
ZZZZZZ	50	13:12:31																										
CCV03	1	13:14:28														X						X						
CCB03	1	13:16:25														X						X						
ZZZZZZ	10	13:18:22																										
ZZZZZZ	10	13:20:19																										
ZZZZZZ	10	13:22:16																										
ZZZZZZ	10	13:24:13																										
ZZZZZZ	10	13:26:09																										
ZZZZZZ	10	13:28:06																										
ZZZZZZ	10	13:30:18																										
540452019	10	13:32:16														X						X						
540452020	10	13:34:12														X						X						
CCV04	1	13:36:11														X						X						

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 03-MAY-21 **End Date:** 03-MAY-21 **Data File:** 210503-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB04	1	13:38:07														X						X						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 05-MAY-21 **End Date:** 05-MAY-21 **Data File:** 210505-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	18:03:37	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	18:07:13	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	18:10:50	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	18:14:26	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	18:18:03	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	18:21:39	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	18:25:15	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	18:28:51	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	18:32:28	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	18:36:04	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	18:39:41	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	18:43:17	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	18:46:54	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	18:50:30																										
ZZZZZZ	1	18:54:07																										
ZZZZZZ	1	18:57:43																										
ZZZZZZ	1	19:01:20																										
ZZZZZZ	1	19:04:56																										
ZZZZZZ	1	19:08:33																										
ZZZZZZ	5	19:12:09																										
CCV	1	19:15:47	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	19:19:23	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	19:23:00																										
ZZZZZZ	1	19:26:37																										
ZZZZZZ	1	19:30:13																										
ZZZZZZ	1	19:33:50																										
ZZZZZZ	1	19:37:27																										
ZZZZZZ	1	19:41:03																										
ZZZZZZ	1	19:44:40																										
ZZZZZZ	1	19:48:16																										
ZZZZZZ	1	19:51:53																										
CCV03	1	19:55:31	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	19:59:07	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204793794	1	20:02:45	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204793795	1	20:06:22	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540452001	1	20:09:58	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540452002	1	20:13:35	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540452003	1	20:17:11	X	X	X	X	X	X		X	X	X		X		X	X	X	X	X	X		X	X			X	X
540452004	1	20:20:48	X	X	X	X	X	X		X	X	X		X		X	X	X	X	X	X		X	X			X	X
540452005	1	20:24:24	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540452006	1	20:28:01	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 05-MAY-21 **End Date:** 05-MAY-21 **Data File:** 210505-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCV04	1	20:31:39	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	20:35:16	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540452007	1	20:38:54	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540452008	1	20:42:31	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
540452009	1	20:46:07	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X			X	X
540452017	1	20:49:44	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204793796	1	20:53:21	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
1204793797	1	20:56:57	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	21:00:34																										
1204793798	5	21:04:11	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV05	1	21:07:49	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	21:11:25	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 06-MAY-21 **End Date:** 07-MAY-21 **Data File:** 210506-15

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	07:16:05											X															
S10	1	07:17:57											X															
S100	1	07:19:48											X															
ICV01	1	07:21:40											X															
ICB01	1	07:23:31											X															
CRDL01	1	07:25:22											X															
ICSA01	1	07:27:14											X															
ICSAB01	1	07:29:05											X															
CCV01	1	07:30:57											X															
CCB01	1	07:32:48											X															
1204793794	1	07:34:41											X															
1204793795	1	07:36:33											X															
540452001	1	07:38:24											X															
540452002	1	07:40:16											X															
540452003	10	07:42:08											X															
540452004	10	07:44:00											X															
540452005	1	07:45:52											X															
540452006	1	07:47:43											X															
CCV02	1	07:49:36											X															
CCB02	1	07:51:28											X															
540452007	1	07:53:21											X															
540452008	1	07:55:13											X															
540452009	1	07:57:04											X															
540452017	10	07:58:56											X															
1204793796	10	08:00:47											X															
1204793797	10	08:02:39											X															
1204793798	50	08:04:31											X															
CCV03	1	08:06:24											X															
CCB03	1	08:08:16											X															

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 06-MAY-21 **End Date:** 07-MAY-21 **Data File:** 210506-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	10:47:17																							X	X		
S10	1	10:49:04																							X	X		
S100	1	10:50:50																							X	X		
ICV01	1	10:52:37																							X	X		
ICB01	1	10:54:24																							X	X		
CRDL01	1	10:56:12																							X	X		
ICSA01	1	10:58:00																							X	X		
ICSAB01	1	10:59:48																							X	X		
CCV01	1	11:01:36																							X	X		
CCB01	1	11:03:24																							X	X		
ZZZZZZ	1	11:05:11																										
ZZZZZZ	1	11:06:58																										
ZZZZZZ	1	11:08:45																										
ZZZZZZ	1	11:10:32																										
ZZZZZZ	1	11:12:19																										
ZZZZZZ	1	11:14:05																										
ZZZZZZ	5	11:15:52																										
CCV	1	11:17:40																							X	X		
CCB	1	11:19:28																							X	X		
ZZZZZZ	1	11:21:15																										
ZZZZZZ	1	11:23:02																										
ZZZZZZ	1	11:24:49																										
ZZZZZZ	1	11:26:36																										
ZZZZZZ	1	11:28:23																										
ZZZZZZ	1	11:30:10																										
ZZZZZZ	1	11:31:57																										
ZZZZZZ	1	11:33:43																										
ZZZZZZ	1	11:35:30																										
ZZZZZZ	2	11:37:27																										
CCV02	1	11:39:15																							X	X		
CCB02	1	11:41:02																							X	X		
1204793794	1	11:42:49																							X	X		
1204793795	1	11:44:36																							X	X		
540452001	1	11:46:23																							X	X		
540452002	1	11:48:10																							X	X		
540452003	1	11:49:57																							X	X		
540452004	1	11:51:44																							X	X		
540452005	1	11:53:30																							X	X		
540452006	1	11:55:17																							X	X		
CCV03	1	11:57:04																							X	X		
CCB03	1	11:58:52																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 06-MAY-21 **End Date:** 07-MAY-21 **Data File:** 210506-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
540452007	1	12:00:40																							X	X		
540452008	1	12:02:27																							X	X		
540452009	1	12:04:14																							X	X		
540452017	1	12:06:01																							X	X		
1204793796	1	12:07:47																							X	X		
1204793797	1	12:09:34																							X	X		
ZZZZZZ	1	12:11:21																										
1204793798	5	12:13:07																							X	X		
CCV04	1	12:14:55																							X	X		
CCB04	1	12:16:43																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL　　**Client Sdg:** 540452

Inst Name: ICPMS15　　**Instrument Type:** MS

Start Date: 06-MAY-21　　**End Date:** 07-MAY-21　　**Data File:** 210506-9

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	13:46:42							X						X							X						
S10	1	13:50:19							X						X							X						
S100	1	13:53:56							X						X							X						
ICV01	1	13:57:33							X						X							X						
ICB01	1	14:01:10							X						X							X						
CRDL01	1	14:04:47							X						X							X						
ICSA01	1	14:08:23							X						X							X						
ICSAB01	1	14:11:58							X						X							X						
CCV01	1	14:15:35							X						X							X						
CCB01	1	14:19:11							X						X							X						
LR01	1	14:22:47							X						X							X						
CCV02	1	14:26:23							X						X							X						
CCB02	1	14:30:00							X						X							X						
ZZZZZZ	1	14:33:37																										
ZZZZZZ	1	14:37:13																										
ZZZZZZ	1	14:40:50																										
ZZZZZZ	1	14:44:27																										
ZZZZZZ	1	14:48:04																										
ZZZZZZ	1	14:51:40																										
ZZZZZZ	1	14:55:16																										
ZZZZZZ	1	14:58:53																										
CCV03	1	15:02:32							X						X							X						
CCB03	1	15:06:08							X						X							X						
ZZZZZZ	1	15:09:46																										
ZZZZZZ	1	15:13:22																										
540452009	1	15:16:59													X													
ZZZZZZ	1	15:20:36																										
ZZZZZZ	1	15:24:13																										
ZZZZZZ	1	15:27:49																										
ZZZZZZ	1	15:31:26																										
ZZZZZZ	5	15:35:03																										
CCV04	1	15:38:41							X						X							X						
CCB04	1	15:42:18							X						X							X						
ZZZZZZ	1	15:45:55																										
ZZZZZZ	1	15:49:32																										
ZZZZZZ	1	15:53:09																										
ZZZZZZ	1	15:56:46																										
540452003	10	16:05:49							X						X							X						
540452004	10	16:09:26							X						X							X						
ZZZZZZ	10	16:15:39																										
ZZZZZZ	10	16:19:16																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 540452

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 06-MAY-21 **End Date:** 07-MAY-21 **Data File:** 210506-9

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	10	16:22:52																										
ZZZZZZ	10	16:26:29																										
CCV05	1	16:30:08							X						X							X						
CCB05	1	16:33:45							X						X							X						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
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Instrument Detection Limits

SDG NO. 540452

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
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Linear Ranges

SDG NO. 540452

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2114322**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204793808	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204793808	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204793809	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204793809	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204793810	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204793810	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204793807 MB	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793808 LCS	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452010	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452011	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452012	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452013	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452014	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452015	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452016	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452018	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793811 SDILT (540452018)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793809 MS (540452018)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
1204793810 MSD (540452018)	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452019	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2
540452020	13-APR-2021 09:20:50	Ground Water	50	04/13/21 15:20	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3265774	HYDROCHLORIC ACID	2.5 mL
3279375	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 93 C
Temperature within limits (Y/N)?: y
Thermometer ID: 12411
Hot Block ID: 14
Digestion tube lot #: 2012333

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2114319**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204793795	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204793795	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204793796	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204793796	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204793797	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204793797	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204793794 MB	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
1204793795 LCS	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452001	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452002	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452003	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452004	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452005	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452006	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452007	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452008	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452009	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
540452017	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
1204793798 SDILT (540452017)	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
1204793796 MS (540452017)	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2
1204793797 MSD (540452017)	14-APR-2021 09:20:12	Ground Water	50	04/14/21 15:20	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3267483	Concentrated Nitric Acid	1 mL
3279986	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 92 C
Temperature within limits (Y/N)?: y
Thermometer ID: 1120212072
Hot Block ID: 11
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 12, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541034

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 16, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04092021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541034

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541034

May 12, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 16, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541034001	PT-11P-04092021
541034002	PT-11P-04092021
541034003	GZW-7S-04092021
541034004	GZW-7S-04092021
541034005	MW-S40-04092021
541034006	MW-S40-04092021
541034007	HA20-CMT-2I-04092021
541034008	HA20-CMT-2I-04092021
541034009	MW-S18-04092021
541034010	MW-S18-04092021
541034011	MW-S04-04092021
541034012	MW-S04-04092021
541034013	EW-1-04092021
541034014	EW-1-04092021
541034015	MW-S20-04092021
541034016	MW-S20-04092021
541034017	MW-SD38-04092021
541034018	MW-SD38-04092021
541034019	GZW-7-1-04092021
541034020	GZW-7-1-04092021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page: 1 of 3
Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]: 04092021
PO Number:

GEL Laboratories LLC

gel.com

Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541034

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) NI	Dissolved Metals (6020A ICP-MS) NI	U-235/U-238 plus Total U Calc. NI								<-- Preservative Type (6) Comments Note: extra sample is required for sample specific QC
P-11P-04092021	4/9/2021	9:30	N	Y	GW	U238		2	X	X	X								Total and Diss. ICP-MS List:
GZW-7S-04092021	4/9/2021	9:45	N	Y	GW	U238		2	X	X	X								
MW-S40-04092021	4/9/2021	10:00	N/MS/MSD	Y	GW	U238		2	X	X	X								Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
HA20-CMT-2I-04092021	4/9/2021	10:00	N	Y	GW	U238		2	X	X	X								
MW-S18-04092021	4/9/2021	10:00	N	Y	GW	U238		2	X	X	X								
MW-S04-04092021	4/9/2021	10:30	N	Y	GW	U238		2	X	X	X								
EW-1-04092021	4/9/2021	10:35	N	Y	GW	U238		2	X	X	X								
MW-S20-04092021	4/9/2021	11:50	N	Y	GW	U238		2	X	X	X								U-235/U-238 plus Total U Calc. for Total and Dissolved
MW-SD38-04092021	4/9/2021	10:15	N	Y	GW	U238		2	X	X	X								
GZW-7-1-04092021	4/9/2021	12:00	N	Y	GW	U238		2	X	X	X								

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/13/21	11:00	1	[signature]	4/13/21	1100
2	[signature]	4/15/21	1500	2	[signature]	4 16 21	925
3				3			

TAT Requested: Normal: X Rush: ____ Specify: ________

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** _____ *°C*

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No radioactive materials detected via NaI. MM

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541034
Received By: STACY BOONE	Date Received: APRIL 16, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 5252 3063 4°c 7734 5252 3637 3°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: see above
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR21-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7734 5252 3512 4°c 7734 5252 3420 3°c

PM (or PMA) review: Initials DS Date 4/19/21 Page 1 of 1

GL-CHL-SR-001 Rev 7

Work Order Containers

Sample ID: **541034001**
Client Sample ID: **PT−11P−04092021**
Description: **Ground Water**

Label: 541034001.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117210 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034001.01.01	**Type: New Undefined**	
08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034002**
Client Sample ID: **PT−11P−04092021**
Description: **Dissolved Ground Water**

Label: 541034002.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117210 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034002.01.01	**Type: New Undefined**	
08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034003**
Client Sample ID: **GZW−7S−04092021**
Description: **Ground Water**

Label: 541034003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117210 to

Work Order Containers

Sample ID: **541034003**
Client Sample ID: **GZW−7S−04092021**
Description: **Ground Water**

Label: 541034003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034003.01.01 **Type: New Undefined**

08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034004**
Client Sample ID: **GZW−7S−04092021**
Description: **Dissolved Ground Water**

Label: 541034004.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117210 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034004.01.01 **Type: New Undefined**

08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034005**
Client Sample ID: **MW−S40−04092021**
Description: **Ground Water**

Label: 541034005.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541034005**
Client Sample ID: **MW−S40−04092021**
Description: **Ground Water**

Label: 541034005.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034006**
Client Sample ID: **MW−S40−04092021**
Description: **Dissolved Ground Water**

Label: 541034006.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117210 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034006.01.01	**Type: New Undefined**	
08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034007**
Client Sample ID: **HA20−CMT−2I−04092021**
Description: **Ground Water**

Label: 541034007.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117210 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034007.01.01	**Type: New Undefined**	
08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541034008**
Client Sample ID: **HA20−CMT−2I−04092021**
Description: **Dissolved Ground Water**

Label: 541034008.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117210 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034008.01.01 **Type: New Undefined**

08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034009**
Client Sample ID: **MW−S18−04092021**
Description: **Ground Water**

Label: 541034009.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117210 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034009.01.01 **Type: New Undefined**

08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034010**
Client Sample ID: **MW−S18−04092021**
Description: **Dissolved Ground Water**

Label: 541034010.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
20−APR−21 09:08:32	Caroline Gause	Changed batch_id from 2117210 to

Work Order Containers

Sample ID: **541034010**
Client Sample ID: **MW−S18−04092021**
Description: **Dissolved Ground Water**

Label: 541034010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Inorganic Prep to Main Cooler (Radioactive)
Label: 541034010.01.01	**Type: New Undefined**	
08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034011**
Client Sample ID: **MW−S04−04092021**
Description: **Ground Water**

Label: 541034011.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:37:07	Hannah Hatherly	Transfered custody to batch 2117210
19−APR−21 19:37:07	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117210 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541034011.01.01	**Type: New Undefined**	
08−MAY−21 17:15:13	Paul Boyd	Transfered custody to batch 2117212
08−MAY−21 17:15:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034012**
Client Sample ID: **MW−S04−04092021**
Description: **Dissolved Ground Water**

Label: 541034012.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541034012.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541034013**
Client Sample ID: **EW−1−04092021**
Description: **Ground Water**

Label: 541034013.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541034013.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034014**
Client Sample ID: **EW−1−04092021**
Description: **Dissolved Ground Water**

Label: 541034014.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541034014.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034015**
Client Sample ID: **MW−S20−04092021**
Description: **Ground Water**

Label: 541034015.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to

Work Order Containers

Sample ID: **541034015**
Client Sample ID: **MW−S20−04092021**
Description: **Ground Water**

Label: 541034015.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541034015.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034016**
Client Sample ID: **MW−S20−04092021**
Description: **Dissolved Ground Water**

Label: 541034016.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541034016.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034017**
Client Sample ID: **MW−SD38−04092021**
Description: **Ground Water**

Label: 541034017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541034017**
Client Sample ID: **MW−SD38−04092021**
Description: **Ground Water**

Label: 541034017.01.01 **Type: New Undefined**

08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034018**
Client Sample ID: **MW−SD38−04092021**
Description: **Dissolved Ground Water**

Label: 541034018.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034018.01.01 **Type: New Undefined**

08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541034019**
Client Sample ID: **GZW−7−1−04092021**
Description: **Ground Water**

Label: 541034019.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034019.01.01 **Type: New Undefined**

08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541034020**
Client Sample ID: **GZW−7−1−04092021**
Description: **Dissolved Ground Water**

Label: 541034020.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 16:48:40	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 09:08:32	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541034020.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 12 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541034

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 34
Analytical Batches: 2117212 and 2117214

Product: **Inorganic Calculations**
Analytical Method: SW846 6020
Analytical Procedure: GL-GC-E-107 REV# 10
Analytical Batch: 2126937

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batches: 2117210 and 2117213

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541034001	PT-11P-04092021
541034002	PT-11P-04092021
541034003	GZW-7S-04092021
541034004	GZW-7S-04092021
541034005	MW-S40-04092021
541034006	MW-S40-04092021
541034007	HA20-CMT-2I-04092021
541034008	HA20-CMT-2I-04092021
541034009	MW-S18-04092021
541034010	MW-S18-04092021
541034011	MW-S04-04092021
541034012	MW-S04-04092021
541034013	EW-1-04092021
541034014	EW-1-04092021
541034015	MW-S20-04092021
541034016	MW-S20-04092021
541034017	MW-SD38-04092021
541034018	MW-SD38-04092021
541034019	GZW-7-1-04092021
541034020	GZW-7-1-04092021
1204799645	Method Blank (MB)**ICP-MS**
1204799650	Method Blank (MB)**ICP-MS**
1204799646	Laboratory Control Sample (LCS)
1204799651	Laboratory Control Sample (LCS)
1204799649	541034006(MW-S40-04092021L) Serial Dilution (SD)
1204799654	541034005(MW-S40-04092021L) Serial Dilution (SD)
1204799647	541034006(MW-S40-04092021S) Matrix Spike (MS)
1204799652	541034005(MW-S40-04092021S) Matrix Spike (MS)

1204799648 541034006(MW-S40-04092021SD) Matrix Spike Duplicate (MSD)
1204799653 541034005(MW-S40-04092021SD) Matrix Spike Duplicate (MSD)

Samples 541034001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541034001 (PT-11P-04092021), 541034002 (PT-11P-04092021), 541034006 (MW-S40-04092021), 541034007 (HA20-CMT-2I-04092021), 541034008 (HA20-CMT-2I-04092021), 541034005 (MW-S40-04092021) and 541034015 (MW-S20-04092021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541034						
	001	**002**	**005**	**006**	**007**	**008**	**015**
Calcium	1X	1X	1X	1X	10X	10X	1X
Iron	1X	1X	1X	1X	1X	1X	10X
Manganese	1X	1X	10X	10X	1X	10X	1X
Sodium	10X	10X	1X	1X	10X	10X	1X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541034 GEL Work Order: 541034

The Qualifiers in this report are defined as follows:

*   Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
**   Indicates analyte is a surrogate compound.
J   Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U   Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name:** **Edmund Frampton**

Date: **12 MAY 2021** **Title:** **Team Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034001 **BASIS:** As Received **DATE COLLECTED** 09-APR-21

CLIENT ID: PT-11P-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-39-3	Barium	42.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-70-2	Calcium	35200	ug/L		80.0	200	200	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-48-4	Cobalt	0.679	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-50-8	Copper	0.481	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:33	210509-7	2117212
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 14:33	210509-7	2117212
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7439-95-4	Magnesium	8840	ug/L		10.0	30.0	30.0	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7439-96-5	Manganese	3.22	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7439-98-7	Molybdenum	0.313	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-02-0	Nickel	3.38	ug/L		0.600	2.00	2.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-09-7	Potassium	4530	ug/L		80.0	300	300	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-23-5	Sodium	92000	ug/L		800	2500	2500	10	MS	PRB	05/09/21 20:42	210509-10	2117212
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 14:33	210509-7	2117212
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 19:46	210508-1	2117212
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/08/21 19:46	210508-1	2117212
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:08	210508-2	2117212
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:08	210508-2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034002 **BASIS:** Filtered **DATE COLLECTED** 09-APR-21

CLIENT ID: PT-11P-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-39-3	Barium	42.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-70-2	Calcium	34300	ug/L		80.0	200	200	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-48-4	Cobalt	0.714	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-50-8	Copper	0.576	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:35	210509-7	2117212
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 14:35	210509-7	2117212
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7439-95-4	Magnesium	8650	ug/L		10.0	30.0	30.0	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7439-96-5	Manganese	2.53	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-02-0	Nickel	3.52	ug/L		0.600	2.00	2.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-09-7	Potassium	4590	ug/L		80.0	300	300	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-23-5	Sodium	97500	ug/L		800	2500	2500	10	MS	PRB	05/09/21 20:45	210509-10	2117212
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 14:35	210509-7	2117212
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 19:48	210508-1	2117212
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/08/21 19:48	210508-1	2117212
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:12	210508-2	2117212
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:12	210508-2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034003 **BASIS:** As Received **DATE COLLECTED** 09−APR−21

CLIENT ID: GZW−7S−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	53.9	ug/L		19.3	50.0	50.0	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−39−3	Barium	5.22	ug/L		0.670	4.00	4.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−70−2	Calcium	21300	ug/L		80.0	200	200	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−50−8	Copper	16.1	ug/L		0.300	2.00	2.00	1	MS	PRB	05/09/21 14:37	210509−7	2117212
7439−89−6	Iron	319	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:37	210509−7	2117212
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7439−95−4	Magnesium	4990	ug/L		10.0	30.0	30.0	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7439−96−5	Manganese	5.40	ug/L		1.00	5.00	5.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7439−98−7	Molybdenum	3.34	ug/L		0.200	1.00	1.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−02−0	Nickel	0.843	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−09−7	Potassium	3270	ug/L		80.0	300	300	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−23−5	Sodium	27300	ug/L		80.0	250	250	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 14:37	210509−7	2117212
7440−61−1	Total Uranium	82.1	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.170	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 19:50	210508−1	2117212
7440−61−1	Uranium−238	81.9	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 19:50	210508−1	2117212
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:16	210508−2	2117212
7440−66−6	Zinc	4.45	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:16	210508−2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034004 **BASIS:** Filtered **DATE COLLECTED** 09−APR−21

CLIENT ID: GZW−7S−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−39−3	Barium	4.55	ug/L		0.670	4.00	4.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−70−2	Calcium	20200	ug/L		80.0	200	200	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−50−8	Copper	9.44	ug/L		0.300	2.00	2.00	1	MS	PRB	05/09/21 14:39	210509−7	2117212
7439−89−6	Iron	189	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:39	210509−7	2117212
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7439−95−4	Magnesium	4820	ug/L		10.0	30.0	30.0	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7439−96−5	Manganese	4.14	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7439−98−7	Molybdenum	3.61	ug/L		0.200	1.00	1.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−02−0	Nickel	0.837	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−09−7	Potassium	3120	ug/L		80.0	300	300	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−23−5	Sodium	26800	ug/L		80.0	250	250	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 14:39	210509−7	2117212
7440−61−1	Total Uranium	63.4	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.128	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 19:52	210508−1	2117212
7440−61−1	Uranium−238	63.3	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 19:52	210508−1	2117212
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:19	210508−2	2117212
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:19	210508−2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034005 **BASIS:** As Received **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-S40-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-39-3	Barium	20.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-70-2	Calcium	18900	ug/L		80.0	200	200	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-48-4	Cobalt	0.584	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 13:26	210509-7	2117214
7439-89-6	Iron	914	ug/L		33.0	100	100	1	MS	PRB	05/09/21 13:26	210509-7	2117214
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7439-95-4	Magnesium	4240	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7439-96-5	Manganese	8700	ug/L		10.0	50.0	50.0	10	MS	PRB	05/10/21 04:48	210509-11	2117214
7439-98-7	Molybdenum	0.679	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-02-0	Nickel	4.53	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-09-7	Potassium	4510	ug/L		80.0	300	300	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-23-5	Sodium	23300	ug/L		80.0	250	250	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:22	210508-1	2117214
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:22	210508-1	2117214
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:21	210508-2	2117214
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:21	210508-2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034006 **BASIS:** Filtered **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-S40-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-39-3	Barium	20.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-70-2	Calcium	19200	ug/L		80.0	200	200	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-48-4	Cobalt	0.559	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:45	210509-7	2117212
7439-89-6	Iron	866	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:45	210509-7	2117212
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7439-95-4	Magnesium	4400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7439-96-5	Manganese	8930	ug/L		10.0	50.0	50.0	10	MS	PRB	05/09/21 20:49	210509-10	2117212
7439-98-7	Molybdenum	0.673	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-02-0	Nickel	4.85	ug/L		0.600	2.00	2.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-09-7	Potassium	4610	ug/L		80.0	300	300	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-23-5	Sodium	24500	ug/L		80.0	250	250	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 14:45	210509-7	2117212
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 19:57	210508-1	2117212
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/08/21 19:57	210508-1	2117212
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:30	210508-2	2117212
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:30	210508-2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034007 **BASIS:** As Received **DATE COLLECTED** 09-APR-21

CLIENT ID: HA20-CMT-2I-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-38-2	Arsenic	4.71	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-39-3	Barium	48.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-70-2	Calcium	56400	ug/L		800	2000	2000	10	MS	PRB	05/09/21 21:03	210509-10	2117212
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-48-4	Cobalt	0.522	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:55	210509-7	2117212
7439-89-6	Iron	849	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:55	210509-7	2117212
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7439-95-4	Magnesium	10400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7439-96-5	Manganese	981	ug/L		1.00	5.00	5.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7439-98-7	Molybdenum	51.2	ug/L		0.200	1.00	1.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-02-0	Nickel	0.772	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-09-7	Potassium	10400	ug/L		80.0	300	300	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-23-5	Sodium	332000	ug/L		800	2500	2500	10	MS	PRB	05/09/21 21:03	210509-10	2117212
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 14:55	210509-7	2117212
7440-61-1	Total Uranium	26.5	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.187	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:06	210508-1	2117212
7440-61-1	Uranium-238	26.3	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:06	210508-1	2117212
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:48	210508-2	2117212
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:48	210508-2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034008 **BASIS:** Filtered **DATE COLLECTED** 09−APR−21

CLIENT ID: HA20−CMT−2I−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−38−2	Arsenic	4.77	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−39−3	Barium	48.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−70−2	Calcium	61900	ug/L		800	2000	2000	10	MS	PRB	05/09/21 21:07	210509−10	2117212
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−48−4	Cobalt	0.524	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:57	210509−7	2117212
7439−89−6	Iron	735	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:57	210509−7	2117212
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7439−95−4	Magnesium	10900	ug/L		10.0	30.0	30.0	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7439−96−5	Manganese	1040	ug/L		10.0	50.0	50.0	10	MS	PRB	05/09/21 21:07	210509−10	2117212
7439−98−7	Molybdenum	52.0	ug/L		0.200	1.00	1.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−02−0	Nickel	0.995	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−09−7	Potassium	10400	ug/L		80.0	300	300	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−23−5	Sodium	366000	ug/L		800	2500	2500	10	MS	PRB	05/09/21 21:07	210509−10	2117212
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 14:57	210509−7	2117212
7440−61−1	Total Uranium	27.6	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.191	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:08	210508−1	2117212
7440−61−1	Uranium−238	27.4	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:08	210508−1	2117212
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:52	210508−2	2117212
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:52	210508−2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034009 **BASIS:** As Received **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-S18-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	357	ug/L		19.3	50.0	50.0	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-38-2	Arsenic	3.35	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-39-3	Barium	12.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-70-2	Calcium	13300	ug/L		80.0	200	200	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-48-4	Cobalt	0.660	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-50-8	Copper	11.7	ug/L		0.300	2.00	2.00	1	MS	PRB	05/09/21 14:59	210509-7	2117212
7439-89-6	Iron	4520	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:59	210509-7	2117212
7439-92-1	Lead	0.885	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7439-95-4	Magnesium	567	ug/L		10.0	30.0	30.0	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7439-96-5	Manganese	121	ug/L		1.00	5.00	5.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7439-98-7	Molybdenum	21.4	ug/L		0.200	1.00	1.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-02-0	Nickel	1.62	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-09-7	Potassium	1490	ug/L		80.0	300	300	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-22-4	Silver	1.94	ug/L		0.300	1.00	1.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-23-5	Sodium	1640	ug/L		80.0	250	250	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 14:59	210509-7	2117212
7440-61-1	Total Uranium	0.575	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:09	210508-1	2117212
7440-61-1	Uranium-238	0.575	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:09	210508-1	2117212
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:55	210508-2	2117212
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:55	210508-2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034010 **BASIS:** Filtered **DATE COLLECTED** 09−APR−21

CLIENT ID: MW−S18−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	303	ug/L		19.3	50.0	50.0	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−38−2	Arsenic	2.48	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−39−3	Barium	13.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−70−2	Calcium	14000	ug/L		80.0	200	200	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−48−4	Cobalt	0.652	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−50−8	Copper	6.83	ug/L		0.300	2.00	2.00	1	MS	PRB	05/09/21 15:01	210509−7	2117212
7439−89−6	Iron	3710	ug/L		33.0	100	100	1	MS	PRB	05/09/21 15:01	210509−7	2117212
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7439−95−4	Magnesium	588	ug/L		10.0	30.0	30.0	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7439−96−5	Manganese	124	ug/L		1.00	5.00	5.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7439−98−7	Molybdenum	20.8	ug/L		0.200	1.00	1.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−02−0	Nickel	1.79	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−09−7	Potassium	1570	ug/L		80.0	300	300	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−22−4	Silver	1.45	ug/L		0.300	1.00	1.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−23−5	Sodium	1700	ug/L		80.0	250	250	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 15:01	210509−7	2117212
7440−61−1	Total Uranium	0.532	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:11	210508−1	2117212
7440−61−1	Uranium−238	0.532	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:11	210508−1	2117212
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:59	210508−2	2117212
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/08/21 23:59	210508−2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034011 **BASIS:** As Received **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-S04-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	70.0	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-39-3	Barium	17.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-70-2	Calcium	13000	ug/L		80.0	200	200	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-48-4	Cobalt	0.385	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-50-8	Copper	0.490	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:03	210509-7	2117212
7439-89-6	Iron	51.1	ug/L	J	33.0	100	100	1	MS	PRB	05/09/21 15:03	210509-7	2117212
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7439-95-4	Magnesium	609	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7439-96-5	Manganese	5.13	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-09-7	Potassium	2130	ug/L		80.0	300	300	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-23-5	Sodium	4190	ug/L		80.0	250	250	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 15:03	210509-7	2117212
7440-61-1	Total Uranium	0.0911	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:13	210508-1	2117212
7440-61-1	Uranium-238	0.0911	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:13	210508-1	2117212
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:02	210508-2	2117212
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:02	210508-2	2117212

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117212	2117210	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034012 **BASIS:** Filtered **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-S04-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-39-3	Barium	16.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-70-2	Calcium	12900	ug/L		80.0	200	200	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-50-8	Copper	0.605	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 13:43	210509-7	2117214
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 13:43	210509-7	2117214
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7439-95-4	Magnesium	598	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7439-96-5	Manganese	2.17	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-09-7	Potassium	2090	ug/L		80.0	300	300	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-23-5	Sodium	4090	ug/L		80.0	250	250	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:34	210508-1	2117214
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:34	210508-1	2117214
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:46	210508-2	2117214
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:46	210508-2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034013 **BASIS:** As Received **DATE COLLECTED** 09−APR−21

CLIENT ID: EW−1−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−39−3	Barium	38.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−70−2	Calcium	33400	ug/L		80.0	200	200	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−48−4	Cobalt	3.25	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 13:45	210509−7	2117214
7439−89−6	Iron	2990	ug/L		33.0	100	100	1	MS	PRB	05/09/21 13:45	210509−7	2117214
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7439−95−4	Magnesium	11500	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7439−96−5	Manganese	396	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−02−0	Nickel	4.96	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−09−7	Potassium	6090	ug/L		80.0	300	300	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−23−5	Sodium	24000	ug/L		80.0	250	250	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−61−1	Total Uranium	1.08	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:36	210508−1	2117214
7440−61−1	Uranium−238	1.08	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:36	210508−1	2117214
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:49	210508−2	2117214
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:49	210508−2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034014 **BASIS:** Filtered **DATE COLLECTED** 09−APR−21

CLIENT ID: EW−1−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−39−3	Barium	39.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−70−2	Calcium	33800	ug/L		80.0	200	200	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−48−4	Cobalt	3.32	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 13:47	210509−7	2117214
7439−89−6	Iron	3090	ug/L		33.0	100	100	1	MS	PRB	05/09/21 13:47	210509−7	2117214
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7439−95−4	Magnesium	11400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7439−96−5	Manganese	401	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−02−0	Nickel	5.15	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−09−7	Potassium	6080	ug/L		80.0	300	300	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−23−5	Sodium	24300	ug/L		80.0	250	250	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−61−1	Total Uranium	0.958	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:38	210508−1	2117214
7440−61−1	Uranium−238	0.958	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:38	210508−1	2117214
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:53	210508−2	2117214
7440−66−6	Zinc	4.85	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:53	210508−2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034015 **BASIS:** As Received **DATE COLLECTED** 09−APR−21

CLIENT ID: MW−S20−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	204	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−38−2	Arsenic	3.22	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−39−3	Barium	21.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−70−2	Calcium	21200	ug/L		80.0	200	200	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−48−4	Cobalt	0.769	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−50−8	Copper	0.443	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 13:49	210509−7	2117214
7439−89−6	Iron	9830	ug/L		330	1000	1000	10	MS	PRB	05/09/21 17:17	210509−7	2117214
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7439−95−4	Magnesium	1060	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7439−96−5	Manganese	213	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7439−98−7	Molybdenum	0.535	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−09−7	Potassium	1290	ug/L		80.0	300	300	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−23−5	Sodium	6930	ug/L		80.0	250	250	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−61−1	Total Uranium	0.439	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 12:00	210509−3	2117214
7440−61−1	Uranium−238	0.439	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/09/21 12:00	210509−3	2117214
7440−62−2	Vanadium	4.35	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:57	210508−2	2117214
7440−66−6	Zinc	3.53	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 00:57	210508−2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034016 **BASIS:** Filtered **DATE COLLECTED** 09−APR−21

CLIENT ID: MW−S20−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	111	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−38−2	Arsenic	3.31	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−39−3	Barium	21.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−70−2	Calcium	21400	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−48−4	Cobalt	0.699	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 13:51	210509−7	2117214
7439−89−6	Iron	9840	ug/L		33.0	100	100	1	MS	PRB	05/09/21 13:51	210509−7	2117214
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7439−95−4	Magnesium	1040	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7439−96−5	Manganese	208	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7439−98−7	Molybdenum	0.378	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−09−7	Potassium	1290	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−23−5	Sodium	6770	ug/L		80.0	250	250	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−61−1	Total Uranium	0.372	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:42	210508−1	2117214
7440−61−1	Uranium−238	0.372	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:42	210508−1	2117214
7440−62−2	Vanadium	3.79	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:00	210508−2	2117214
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:00	210508−2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034017 **BASIS:** As Received **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-SD38-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	26.6	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-39-3	Barium	51.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-70-2	Calcium	23300	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-48-4	Cobalt	3.82	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-50-8	Copper	0.812	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 13:53	210509-7	2117214
7439-89-6	Iron	4390	ug/L		33.0	100	100	1	MS	PRB	05/09/21 13:53	210509-7	2117214
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7439-95-4	Magnesium	8720	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7439-96-5	Manganese	330	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-02-0	Nickel	4.81	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-09-7	Potassium	5460	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-23-5	Sodium	22800	ug/L		80.0	250	250	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-61-1	Total Uranium	0.0839	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:43	210508-1	2117214
7440-61-1	Uranium-238	0.0839	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:43	210508-1	2117214
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:04	210508-2	2117214
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:04	210508-2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034018 **BASIS:** Filtered **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-SD38-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-39-3	Barium	47.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-70-2	Calcium	22200	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-48-4	Cobalt	3.63	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-50-8	Copper	0.332	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 13:55	210509-7	2117214
7439-89-6	Iron	3820	ug/L		33.0	100	100	1	MS	PRB	05/09/21 13:55	210509-7	2117214
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7439-95-4	Magnesium	8300	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7439-96-5	Manganese	312	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-02-0	Nickel	4.79	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-09-7	Potassium	5200	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-23-5	Sodium	21500	ug/L		80.0	250	250	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:45	210508-1	2117214
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:45	210508-1	2117214
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:07	210508-2	2117214
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:07	210508-2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034019 **BASIS:** As Received **DATE COLLECTED** 09−APR−21

CLIENT ID: GZW−7−1−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−39−3	Barium	6.28	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−70−2	Calcium	21000	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−50−8	Copper	22.6	ug/L		0.300	2.00	2.00	1	MS	PRB	05/09/21 13:57	210509−7	2117214
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 13:57	210509−7	2117214
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7439−95−4	Magnesium	5040	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7439−98−7	Molybdenum	0.651	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−02−0	Nickel	0.772	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−09−7	Potassium	3410	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−23−5	Sodium	30700	ug/L		80.0	250	250	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−61−1	Total Uranium	68.1	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.135	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:47	210508−1	2117214
7440−61−1	Uranium−238	67.9	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:47	210508−1	2117214
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:11	210508−2	2117214
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:11	210508−2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541034 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541034020 **BASIS:** Filtered **DATE COLLECTED** 09−APR−21

CLIENT ID: GZW−7−1−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−39−3	Barium	6.25	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−70−2	Calcium	20800	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−50−8	Copper	22.1	ug/L		0.300	2.00	2.00	1	MS	PRB	05/09/21 13:59	210509−7	2117214
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 13:59	210509−7	2117214
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7439−95−4	Magnesium	4940	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7439−98−7	Molybdenum	0.631	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−02−0	Nickel	0.794	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−09−7	Potassium	3310	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−23−5	Sodium	30300	ug/L		80.0	250	250	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−61−1	Total Uranium	51.3	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.108	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:52	210508−1	2117214
7440−61−1	Uranium−238	51.2	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:52	210508−1	2117214
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:15	210508−2	2117214
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:15	210508−2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.4	90.0 − 110.0	MS	08−MAY−21 19:30	210508−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 19:30	210508−1
	Aluminum	5040	ug/L	5050	ug/L	99.8	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Antimony	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Arsenic	48.6	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Barium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Beryllium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Cadmium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Calcium	4970	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Chromium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Cobalt	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Magnesium	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Manganese	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Molybdenum	48.7	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Nickel	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Potassium	5080	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Selenium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Silver	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Sodium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Thallium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Thorium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Vanadium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Zinc	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Uranium−235	0.36	ug/L	0.36	ug/L	99.7	90.0 − 110.0	MS	09−MAY−21 11:44	210509−3
	Uranium−238	49.1	ug/L	49.64	ug/L	98.8	90.0 − 110.0	MS	09−MAY−21 11:44	210509−3
	Copper	52	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	09−MAY−21 13:03	210509−7
	Iron	5010	ug/L	5000	ug/L	100.1	90.0 − 110.0	MS	09−MAY−21 13:03	210509−7
	Thorium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	09−MAY−21 13:03	210509−7
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 19:58	210509−10
	Manganese	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 19:58	210509−10

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Sodium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	09−MAY−21 19:58	210509−10
	Manganese	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 01:26	210509−11
CCV01										
	Uranium−235	0.37	ug/L	0.36	ug/L	102	90.0 − 110.0	MS	08−MAY−21 19:39	210508−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 19:39	210508−1
	Aluminum	5000	ug/L	5050	ug/L	99	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Antimony	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Arsenic	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Barium	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Beryllium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Cadmium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Calcium	4870	ug/L	5000	ug/L	97.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Chromium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Cobalt	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Lead	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Magnesium	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Manganese	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Molybdenum	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Nickel	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Potassium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Selenium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Silver	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Sodium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Thallium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Thorium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Vanadium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Zinc	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Uranium−235	0.38	ug/L	0.36	ug/L	106.8	90.0 − 110.0	MS	09−MAY−21 11:53	210509−3
	Uranium−238	51.5	ug/L	49.64	ug/L	103.8	90.0 − 110.0	MS	09−MAY−21 11:53	210509−3
	Copper	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 13:13	210509−7
	Iron	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	09−MAY−21 13:13	210509−7

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thorium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	09−MAY−21 13:13	210509−7
	Calcium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	09−MAY−21 20:16	210509−10
	Manganese	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	09−MAY−21 20:16	210509−10
	Sodium	5170	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	09−MAY−21 20:16	210509−10
	Manganese	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	10−MAY−21 01:44	210509−11
CCV02										
	Uranium−235	0.37	ug/L	0.36	ug/L	101.5	90.0 − 110.0	MS	08−MAY−21 19:53	210508−1
	Uranium−238	50.7	ug/L	49.64	ug/L	102.2	90.0 − 110.0	MS	08−MAY−21 19:53	210508−1
	Aluminum	5080	ug/L	5050	ug/L	100.5	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Antimony	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Arsenic	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Barium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Beryllium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Cadmium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Calcium	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Chromium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Cobalt	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Lead	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Manganese	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Molybdenum	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Nickel	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Potassium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Selenium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Silver	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Sodium	5240	ug/L	5000	ug/L	104.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Thallium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Thorium	54.9	ug/L	50	ug/L	109.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Vanadium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Zinc	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Uranium−235	0.38	ug/L	0.36	ug/L	105.4	90.0 − 110.0	MS	09−MAY−21 12:07	210509−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Uranium−238	50.9	ug/L	49.64	ug/L	102.6	90.0 − 110.0	MS	09−MAY−21 12:07	210509−3
	Copper	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	09−MAY−21 13:19	210509−7
	Iron	5090	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	09−MAY−21 13:19	210509−7
	Thorium	55.3	ug/L	50	ug/L	110.6	90.0 − 110.0 *	MS	09−MAY−21 13:19	210509−7
	Calcium	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	MS	09−MAY−21 20:27	210509−10
	Manganese	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	09−MAY−21 20:27	210509−10
	Sodium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	09−MAY−21 20:27	210509−10
	Manganese	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	10−MAY−21 01:55	210509−11
CCV03										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.6	90.0 − 110.0	MS	08−MAY−21 20:15	210508−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 20:15	210508−1
	Aluminum	5030	ug/L	5050	ug/L	99.6	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Antimony	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Arsenic	48	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Barium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Beryllium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Cadmium	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Calcium	4940	ug/L	5000	ug/L	98.9	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Chromium	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Cobalt	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Lead	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Magnesium	4980	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Manganese	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Molybdenum	48.4	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Nickel	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Potassium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Selenium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Silver	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Sodium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Thallium	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Thorium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Vanadium	49.5	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Zinc	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	08−MAY−21 23:23	210508−2
	Copper	53.6	ug/L	50	ug/L	107.3	90.0 − 110.0	MS	09−MAY−21 13:39	210509−7
	Iron	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	09−MAY−21 13:39	210509−7
	Thorium	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	09−MAY−21 13:39	210509−7
	Calcium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	09−MAY−21 21:10	210509−10
	Manganese	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 21:10	210509−10
	Sodium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	09−MAY−21 21:10	210509−10
	Manganese	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	10−MAY−21 04:34	210509−11
CCV04										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.2	90.0 − 110.0	MS	08−MAY−21 20:31	210508−1
	Uranium−238	51.6	ug/L	49.64	ug/L	104	90.0 − 110.0	MS	08−MAY−21 20:31	210508−1
	Aluminum	5030	ug/L	5050	ug/L	99.5	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Antimony	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Arsenic	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Barium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Beryllium	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Cadmium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Calcium	4920	ug/L	5000	ug/L	98.4	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Chromium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Cobalt	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Lead	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Magnesium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Manganese	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Molybdenum	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Nickel	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Potassium	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Selenium	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Silver	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Sodium	5090	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thorium	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Vanadium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Zinc	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Copper	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	09−MAY−21 14:01	210509−7
	Iron	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	09−MAY−21 14:01	210509−7
	Thorium	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	09−MAY−21 14:01	210509−7
	Manganese	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	10−MAY−21 05:02	210509−11
CCV05										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.1	90.0 − 110.0	MS	08−MAY−21 20:49	210508−1
	Uranium−238	51.2	ug/L	49.64	ug/L	103.2	90.0 − 110.0	MS	08−MAY−21 20:49	210508−1
	Aluminum	4910	ug/L	5050	ug/L	97.2	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Antimony	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Arsenic	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Barium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Beryllium	48.2	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Cadmium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Calcium	4850	ug/L	5000	ug/L	97	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Chromium	48.2	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Cobalt	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Lead	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Magnesium	4900	ug/L	5000	ug/L	97.9	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Manganese	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Molybdenum	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Nickel	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Selenium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Silver	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Sodium	5000	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Thallium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Thorium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Vanadium	48.6	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Zinc	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Copper	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	09−MAY−21 14:25	210509−7
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	09−MAY−21 14:25	210509−7
	Thorium	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	09−MAY−21 14:25	210509−7
CCV06										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.8	90.0 − 110.0	MS	08−MAY−21 21:08	210508−1
	Uranium−238	50.9	ug/L	49.64	ug/L	102.6	90.0 − 110.0	MS	08−MAY−21 21:08	210508−1
	Aluminum	4870	ug/L	5050	ug/L	96.5	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Antimony	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Arsenic	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Barium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Beryllium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Cadmium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Calcium	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Chromium	47.6	ug/L	50	ug/L	95.3	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Cobalt	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Lead	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Magnesium	4840	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Manganese	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Molybdenum	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Nickel	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Potassium	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Selenium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Silver	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Sodium	4970	ug/L	5000	ug/L	99.3	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Thallium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Thorium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Vanadium	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Zinc	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Copper	52	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	09−MAY−21 14:41	210509−7
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	09−MAY−21 14:41	210509−7

METALS
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Initial and Continuing Calibration Verification

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thorium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	09−MAY−21 14:41	210509−7
CCV07										
	Copper	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	09−MAY−21 15:05	210509−7
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	09−MAY−21 15:05	210509−7
	Thorium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	09−MAY−21 15:05	210509−7
CCV08										
	Copper	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	09−MAY−21 16:08	210509−7
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	09−MAY−21 16:08	210509−7
	Thorium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	09−MAY−21 16:08	210509−7
CCV09										
	Copper	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	09−MAY−21 17:19	210509−7
	Iron	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	09−MAY−21 17:19	210509−7
	Thorium	52.6	ug/L	50	ug/L	105.1	90.0 − 110.0	MS	09−MAY−21 17:19	210509−7

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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CRDL Standard for ICP & ICPMS

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0016	ug/L	.0014	ug/L	114.3	80.0 − 120.0	MS	08−MAY−21 19:34	210508−1
	Uranium−238	.206	ug/L	.2	ug/L	103	80.0 − 120.0	MS	08−MAY−21 19:34	210508−1
	Aluminum	50.7	ug/L	50	ug/L	101.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Antimony	3.07	ug/L	3	ug/L	102.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Arsenic	4.87	ug/L	5	ug/L	97.4	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Barium	4.19	ug/L	4	ug/L	104.7	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Beryllium	.563	ug/L	.5	ug/L	112.6	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Cadmium	1.01	ug/L	1	ug/L	101.4	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Calcium	230	ug/L	200	ug/L	115.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Chromium	10.1	ug/L	10	ug/L	101.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Cobalt	1.04	ug/L	1	ug/L	103.7	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Lead	2.1	ug/L	2	ug/L	105.1	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Magnesium	31.2	ug/L	30	ug/L	104.1	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Manganese	5.09	ug/L	5	ug/L	101.8	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Molybdenum	1.02	ug/L	1	ug/L	102.1	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Nickel	2.09	ug/L	2	ug/L	104.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Potassium	307	ug/L	300	ug/L	102.4	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Selenium	4.78	ug/L	5	ug/L	95.6	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Silver	1.02	ug/L	1	ug/L	101.9	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Sodium	266	ug/L	250	ug/L	106.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Thallium	2.04	ug/L	2	ug/L	102.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Thorium	2.21	ug/L	2	ug/L	110.5	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Vanadium	20.3	ug/L	20	ug/L	101.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Zinc	19.5	ug/L	20	ug/L	97.7	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Uranium−235	.0015	ug/L	.0014	ug/L	107.1	80.0 − 120.0	MS	09−MAY−21 11:47	210509−3
	Uranium−238	.199	ug/L	.2	ug/L	99.3	80.0 − 120.0	MS	09−MAY−21 11:47	210509−3
	Copper	2.2	ug/L	2	ug/L	110	80.0 − 120.0	MS	09−MAY−21 13:07	210509−7
	Iron	103	ug/L	100	ug/L	102.6	80.0 − 120.0	MS	09−MAY−21 13:07	210509−7
	Thorium	2.09	ug/L	2	ug/L	104.5	80.0 − 120.0	MS	09−MAY−21 13:07	210509−7
	Calcium	223	ug/L	200	ug/L	111.3	80.0 − 120.0	MS	09−MAY−21 20:05	210509−10
	Manganese	5.03	ug/L	5	ug/L	100.7	80.0 − 120.0	MS	09−MAY−21 20:05	210509−10
	Sodium	263	ug/L	250	ug/L	105	80.0 − 120.0	MS	09−MAY−21 20:05	210509−10

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
	Manganese	5.01	ug/L	5	ug/L	100.2	80.0 − 120.0	MS	10−MAY−21 01:34	210509−11

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541034

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	08−MAY−21 19:32	210508−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	08−MAY−21 19:32	210508−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	08−MAY−21 22:29	210508−2
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	08−MAY−21 22:29	210508−2
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	08−MAY−21 22:29	210508−2
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	08−MAY−21 22:29	210508−2
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	09−MAY−21 11:45	210509−3
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	09−MAY−21 11:45	210509−3
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	09−MAY−21 13:05	210509−7
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	09−MAY−21 13:05	210509−7
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	09−MAY−21 13:05	210509−7
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	09−MAY−21 20:02	210509−10
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	09−MAY−21 20:02	210509−10

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541034

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	09−MAY−21 20:02	210509−10
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	10−MAY−21 01:30	210509−11
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 19:41	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 19:41	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	08−MAY−21 22:47	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	08−MAY−21 22:47	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Molybdenum	0.768	+/−1	J	0.2	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	08−MAY−21 22:47	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	08−MAY−21 22:47	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	09−MAY−21 11:54	210509−3
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	09−MAY−21 11:54	210509−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 13:15	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 13:15	210509−7

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541034

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 13:15	210509−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 20:20	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 20:20	210509−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 20:20	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 01:48	210509−11
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 19:55	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 19:55	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	08−MAY−21 22:57	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	08−MAY−21 22:57	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Molybdenum	0.56	+/−1	J	0.2	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	08−MAY−21 22:57	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	08−MAY−21 22:57	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Thorium	0.958	+/−2	J	0.7	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	09−MAY−21 12:09	210509−3

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541034

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	09−MAY−21 12:09	210509−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 13:20	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 13:20	210509−7
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 13:20	210509−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 20:31	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 20:31	210509−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 20:31	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 01:59	210509−11
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 20:17	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 20:17	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	08−MAY−21 23:26	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	08−MAY−21 23:26	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	08−MAY−21 23:26	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	08−MAY−21 23:26	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	08−MAY−21 23:26	210508−2

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541034

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 23:26	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 13:41	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 13:41	210509−7
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 13:41	210509−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 21:14	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 21:14	210509−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 21:14	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 04:37	210509−11
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 20:33	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 20:33	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 00:10	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 00:10	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 00:10	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 00:10	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 00:10	210508−2

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541034

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 14:03	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 14:03	210509−7
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 14:03	210509−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 05:06	210509−11
CCB05										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 20:50	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 20:50	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 00:42	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 00:42	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 00:42	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 00:42	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 00:42	210508−2

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541034

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 14:27	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 14:27	210509−7
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 14:27	210509−7
CCB06										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 21:10	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 21:10	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 01:22	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 01:22	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 01:22	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 01:22	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 14:43	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 14:43	210509−7

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541034

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 14:43	210509−7
CCB07										
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 15:07	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 15:07	210509−7
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 15:07	210509−7
CCB08										
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 16:10	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 16:10	210509−7
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 16:10	210509−7
CCB09										
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 17:21	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 17:21	210509−7
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 17:21	210509−7

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541034

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204799645								
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Molybdenum	0.351	ug/L	+/−0.5	BJ	MS	0.200	0.500
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
1204799650								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0

SW846

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541034

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					08−MAY−21 19:36	210508−1
	Uranium−238	0.024	ug/L					08−MAY−21 19:36	210508−1
ICSAB01									
	Uranium−235	0.144	ug/L	.145	ug/L	99	80.0 − 120.0	08−MAY−21 19:37	210508−1
	Uranium−238	20.0	ug/L	19.86	ug/L	101	80.0 − 120.0	08−MAY−21 19:37	210508−1

METALS
−4−
Interference Check Sample

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	94300	ug/L	100000	ug/L	94.3	80.0 − 120.0	09−MAY−21 20:09	210509−10
	Manganese	5.43	ug/L					09−MAY−21 20:09	210509−10
	Sodium	95500	ug/L	100000	ug/L	95.5	80.0 − 120.0	09−MAY−21 20:09	210509−10
ICSAB01									
	Calcium	95400	ug/L	100000	ug/L	95.4	80.0 − 120.0	09−MAY−21 20:13	210509−10
	Manganese	24.7	ug/L	25.72	ug/L	96.2	80.0 − 120.0	09−MAY−21 20:13	210509−10
	Sodium	98000	ug/L	100000	ug/L	98	80.0 − 120.0	09−MAY−21 20:13	210509−10

METALS
−4−
Interference Check Sample

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Manganese	6.24	ug/L					10−MAY−21 01:37	210509−11
ICSAB01									
	Manganese	25.0	ug/L	25.72	ug/L	97.2	80.0 − 120.0	10−MAY−21 01:41	210509−11

METALS
−4−
Interference Check Sample

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	90100	ug/L	100000	ug/L	90.1	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Antimony	0.131	ug/L					08−MAY−21 22:36	210508−2
	Arsenic	0.128	ug/L					08−MAY−21 22:36	210508−2
	Barium	2.56	ug/L					08−MAY−21 22:36	210508−2
	Beryllium	0.003	ug/L					08−MAY−21 22:36	210508−2
	Cadmium	0.878	ug/L					08−MAY−21 22:36	210508−2
	Calcium	93600	ug/L	100000	ug/L	93.6	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Chromium	0.78	ug/L					08−MAY−21 22:36	210508−2
	Cobalt	0.47	ug/L					08−MAY−21 22:36	210508−2
	Lead	0.214	ug/L					08−MAY−21 22:36	210508−2
	Magnesium	89700	ug/L	100000	ug/L	89.7	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Manganese	4.69	ug/L					08−MAY−21 22:36	210508−2
	Molybdenum	1930	ug/L	2000	ug/L	96.5	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Nickel	0.419	ug/L					08−MAY−21 22:36	210508−2
	Potassium	90700	ug/L	100000	ug/L	90.7	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Selenium	−0.007	ug/L					08−MAY−21 22:36	210508−2
	Silver	0.14	ug/L					08−MAY−21 22:36	210508−2
	Sodium	99700	ug/L	100000	ug/L	99.7	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Thallium	0.101	ug/L					08−MAY−21 22:36	210508−2
	Thorium	1.8	ug/L					08−MAY−21 22:36	210508−2
	Vanadium	0.002	ug/L					08−MAY−21 22:36	210508−2
	Zinc	3.09	ug/L					08−MAY−21 22:36	210508−2
ICSAB01									
	Aluminum	90000	ug/L	100000	ug/L	90	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Antimony	20.6	ug/L	20	ug/L	103	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Arsenic	20.4	ug/L	20	ug/L	102	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Barium	21.7	ug/L	22.35	ug/L	96.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Beryllium	18.2	ug/L	20	ug/L	91	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Cadmium	20.2	ug/L	20.72	ug/L	97.5	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Calcium	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	08−MAY−21 22:39	210508−2

METALS
−4−
Interference Check Sample

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Chromium	19.8	ug/L	20	ug/L	98.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Cobalt	19.1	ug/L	20.65	ug/L	92.3	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Lead	19.1	ug/L	20	ug/L	95.5	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Magnesium	88100	ug/L	100000	ug/L	88.1	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Manganese	23.6	ug/L	25.72	ug/L	91.6	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Molybdenum	1960	ug/L	2000	ug/L	97.8	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Nickel	18.4	ug/L	20	ug/L	91.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Potassium	89900	ug/L	100000	ug/L	89.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Selenium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Silver	18.5	ug/L	20	ug/L	92.6	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Sodium	98000	ug/L	100000	ug/L	98	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Thallium	18.9	ug/L	20	ug/L	94.6	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Thorium	21.1	ug/L	20	ug/L	105	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Vanadium	19.5	ug/L	20	ug/L	97.4	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Zinc	21.8	ug/L	20	ug/L	109	80.0 − 120.0	08−MAY−21 22:39	210508−2

METALS
−4−
Interference Check Sample

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					09−MAY−21 11:49	210509−3
	Uranium−238	0.023	ug/L					09−MAY−21 11:49	210509−3
ICSAB01									
	Uranium−235	0.148	ug/L	.145	ug/L	102	80.0 − 120.0	09−MAY−21 11:51	210509−3
	Uranium−238	20.2	ug/L	19.86	ug/L	101	80.0 − 120.0	09−MAY−21 11:51	210509−3

SW846

METALS
−4−
Interference Check Sample

SDG No: 541034

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Copper	0.239	ug/L					09−MAY−21 13:09	210509−7
	Iron	80000	ug/L	100000	ug/L	80	80.0 − 120.0	09−MAY−21 13:09	210509−7
	Thorium	2.14	ug/L					09−MAY−21 13:09	210509−7
ICSAB01									
	Copper	17.7	ug/L	20	ug/L	88.6	80.0 − 120.0	09−MAY−21 13:11	210509−7
	Iron	80900	ug/L	100000	ug/L	81	80.0 − 120.0	09−MAY−21 13:11	210509−7
	Thorium	21.3	ug/L	20	ug/L	106	80.0 − 120.0	09−MAY−21 13:11	210509−7

METALS
−5a−

Matrix Spike Summary

SDG NO. 541034 **Client ID** MW−S40−04092021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034006 **Spike ID:** 1204799647

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Antimony	ug/L	75−125	51.5		1.00	U	50.0	103		MS
Arsenic	ug/L	75−125	48.2		2.00	U	50.0	94.9		MS
Barium	ug/L	75−125	70.8		20.8		50.0	100		MS
Beryllium	ug/L	75−125	53.9		0.200	U	50.0	108		MS
Cadmium	ug/L	75−125	50.4		0.300	U	50.0	101		MS
Calcium	ug/L		20400		19200		2000	58.9	N/A	MS
Aluminum	ug/L	75−125	1980		19.3	U	2000	99		MS
Chromium	ug/L	75−125	47.9		3.00	U	50.0	95.4		MS
Cobalt	ug/L	75−125	47.9		0.559	J	50.0	94.7		MS
Copper	ug/L	75−125	50.1		0.300	U	50.0	99.7		MS
Iron	ug/L	75−125	2830		866		2000	98.3		MS
Lead	ug/L	75−125	49.8		0.500	U	50.0	99.7		MS
Magnesium	ug/L	75−125	6150		4400		2000	87.4		MS
Manganese	ug/L		8470		8930		50.0	−915	N/A	MS
Molybdenum	ug/L	75−125	52.4		0.673	J	50.0	103		MS
Nickel	ug/L	75−125	52.3		4.85		50.0	94.8		MS
Potassium	ug/L	75−125	6310		4610		2000	85.1		MS
Selenium	ug/L	75−125	48.7		2.00	U	50.0	97.1		MS
Silver	ug/L	75−125	50.6		0.300	U	50.0	101		MS
Sodium	ug/L		25200		24500		2000	34	N/A	MS
Thallium	ug/L	75−125	49.6		0.600	U	50.0	98.9		MS
Thorium	ug/L	75−125	51.4		0.700	U	50.0	103		MS

METALS
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Matrix Spike Summary

SDG NO. 541034 **Client ID:** MW−S40−04092021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034006 **Spike ID:** 1204799647

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.374		0.0100	U	0.360	104		MS
Uranium−238	ug/L	75−125	51.1		0.0670	U	49.6	103		MS
Vanadium	ug/L	75−125	49.6		3.30	U	50.0	96.9		MS
Zinc	ug/L	75−125	51.7		3.30	U	50.0	98		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541034 **Client ID** MW−S40−04092021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034006 **Spike ID:** 1204799648

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	1990		19.3	U	2000	99.2		MS
Antimony	ug/L	75−125	51.7		1.00	U	50.0	103		MS
Arsenic	ug/L	75−125	47.5		2.00	U	50.0	93.5		MS
Barium	ug/L	75−125	70.2		20.8		50.0	98.9		MS
Beryllium	ug/L	75−125	53.5		0.200	U	50.0	107		MS
Cadmium	ug/L	75−125	49.5		0.300	U	50.0	98.9		MS
Calcium	ug/L		20700		19200		2000	75.3	N/A	MS
Chromium	ug/L	75−125	48.6		3.00	U	50.0	96.8		MS
Cobalt	ug/L	75−125	49.3		0.559	J	50.0	97.5		MS
Copper	ug/L	75−125	50.6		0.300	U	50.0	101		MS
Iron	ug/L	75−125	2840		866		2000	98.5		MS
Lead	ug/L	75−125	49.6		0.500	U	50.0	99.2		MS
Magnesium	ug/L	75−125	6240		4400		2000	91.7		MS
Manganese	ug/L		8740		8930		50.0	−376	N/A	MS
Molybdenum	ug/L	75−125	52.5		0.673	J	50.0	104		MS
Nickel	ug/L	75−125	53.7		4.85		50.0	97.6		MS
Potassium	ug/L	75−125	6470		4610		2000	93.2		MS
Selenium	ug/L	75−125	49.0		2.00	U	50.0	97.7		MS
Silver	ug/L	75−125	50.8		0.300	U	50.0	102		MS
Sodium	ug/L		25500		24500		2000	50.3	N/A	MS
Thallium	ug/L	75−125	49.8		0.600	U	50.0	99.4		MS
Thorium	ug/L	75−125	52.2		0.700	U	50.0	104		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541034 **Client ID**: MW−S40−04092021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034006 **Spike ID:** 1204799648

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.371		0.0100	U	0.360	103		MS
Uranium−238	ug/L	75−125	51.4		0.0670	U	49.6	103		MS
Vanadium	ug/L	75−125	49.9		3.30	U	50.0	97.6		MS
Zinc	ug/L	75−125	50.0		3.30	U	50.0	94.4		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Summary

SDG NO. 541034 **Client ID** MW−S40−04092021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034005 **Spike ID:** 1204799652

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Calcium	ug/L		20100		18900		2000	60.7	N/A	MS
Chromium	ug/L	75−125	46.7		3.00	U	50.0	93.2		MS
Cobalt	ug/L	75−125	47.8		0.584	J	50.0	94.4		MS
Copper	ug/L	75−125	49.8		0.300	U	50.0	99.2		MS
Iron	ug/L	75−125	2880		914		2000	98.1		MS
Lead	ug/L	75−125	50.3		0.500	U	50.0	101		MS
Magnesium	ug/L	75−125	6030		4240		2000	89.1		MS
Manganese	ug/L		8810		8700		50.0	222	N/A	MS
Molybdenum	ug/L	75−125	52.6		0.679	J	50.0	104		MS
Nickel	ug/L	75−125	51.3		4.53		50.0	93.6		MS
Potassium	ug/L	75−125	6230		4510		2000	86.4		MS
Selenium	ug/L	75−125	48.3		2.00	U	50.0	96.4		MS
Silver	ug/L	75−125	50.7		0.300	U	50.0	101		MS
Sodium	ug/L		24300		23300		2000	49.5	N/A	MS
Thallium	ug/L	75−125	50.1		0.600	U	50.0	100		MS
Thorium	ug/L	75−125	50.8		0.700	U	50.0	101		MS
Uranium−235	ug/L	75−125	0.362		0.0100	U	0.360	101		MS
Uranium−238	ug/L	75−125	50.7		0.0670	U	49.6	102		MS
Vanadium	ug/L	75−125	48.1		3.30	U	50.0	94.1		MS
Zinc	ug/L	75−125	49.4		3.30	U	50.0	94.5		MS
Aluminum	ug/L	75−125	1940		19.3	U	2000	96.5		MS
Antimony	ug/L	75−125	51.5		1.00	U	50.0	103		MS

METALS
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Matrix Spike Summary

SDG NO. 541034 **Client ID** MW−S40−04092021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034005 **Spike ID:** 1204799652

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Arsenic	ug/L	75−125	47.8		2.00	U	50.0	94.2		MS
Barium	ug/L	75−125	71.6		20.5		50.0	102		MS
Beryllium	ug/L	75−125	52.4		0.200	U	50.0	105		MS
Cadmium	ug/L	75−125	50.0		0.300	U	50.0	99.9		MS

***Analytical Methods:**

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METALS
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Matrix Spike Duplicate Summary

SDG NO. 541034 **Client ID** MW−S40−04092021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034005 **Spike ID:** 1204799653

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	1950		19.3	U	2000	97.5		MS
Antimony	ug/L	75−125	51.8		1.00	U	50.0	103		MS
Arsenic	ug/L	75−125	48.8		2.00	U	50.0	96.4		MS
Barium	ug/L	75−125	72.5		20.5		50.0	104		MS
Beryllium	ug/L	75−125	52.6		0.200	U	50.0	105		MS
Cadmium	ug/L	75−125	50.3		0.300	U	50.0	100		MS
Calcium	ug/L		20600		18900		2000	83.7	N/A	MS
Chromium	ug/L	75−125	47.8		3.00	U	50.0	95.2		MS
Cobalt	ug/L	75−125	48.5		0.584	J	50.0	95.8		MS
Copper	ug/L	75−125	52.9		0.300	U	50.0	105		MS
Iron	ug/L	75−125	2950		914		2000	102		MS
Lead	ug/L	75−125	50.9		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	6140		4240		2000	94.8		MS
Manganese	ug/L		9040		8700		50.0	690	N/A	MS
Molybdenum	ug/L	75−125	52.9		0.679	J	50.0	105		MS
Nickel	ug/L	75−125	52.4		4.53		50.0	95.7		MS
Potassium	ug/L	75−125	6410		4510		2000	95		MS
Selenium	ug/L	75−125	49.0		2.00	U	50.0	97.8		MS
Silver	ug/L	75−125	51.3		0.300	U	50.0	103		MS
Sodium	ug/L		25000		23300		2000	84.4	N/A	MS
Thallium	ug/L	75−125	50.5		0.600	U	50.0	101		MS
Thorium	ug/L	75−125	51.7		0.700	U	50.0	103		MS

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Matrix Spike Duplicate Summary

SDG NO. 541034 **Client ID:** MW−S40−04092021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034005 **Spike ID:** 1204799653

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.368		0.0100	U	0.360	102		MS
Uranium−238	ug/L	75−125	51.9		0.0670	U	49.6	104		MS
Vanadium	ug/L	75−125	49.2		3.30	U	50.0	96.3		MS
Zinc	ug/L	75−125	51.6		3.30	U	50.0	98.8		MS

***Analytical Methods:**

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Duplicate Sample Summary

SDG No.: 541034 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S40−04092021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799647 **Duplicate ID:** 1204799648 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1980		1990		.251		MS
Antimony	ug/L	+/−20	51.5		51.7		.335		MS
Arsenic	ug/L	+/−20	48.2		47.5		1.46		MS
Barium	ug/L	+/−20	70.8		70.2		.895		MS
Beryllium	ug/L	+/−20	53.9		53.5		.747		MS
Cadmium	ug/L	+/−20	50.4		49.5		1.79		MS
Calcium	ug/L	+/−20	20400		20700		1.6		MS
Chromium	ug/L	+/−20	47.9		48.6		1.42		MS
Cobalt	ug/L	+/−20	47.9		49.3		2.83		MS
Copper	ug/L	+/−20	50.1		50.6		.976		MS
Iron	ug/L	+/−20	2830		2840		.132		MS
Lead	ug/L	+/−20	49.8		49.6		.442		MS
Magnesium	ug/L	+/−20	6150		6240		1.41		MS
Manganese	ug/L	+/−20	8470		8740		3.13		MS
Molybdenum	ug/L	+/−20	52.4		52.5		.288		MS
Nickel	ug/L	+/−20	52.3		53.7		2.62		MS
Potassium	ug/L	+/−20	6310		6470		2.51		MS
Selenium	ug/L	+/−20	48.7		49.0		.631		MS
Silver	ug/L	+/−20	50.6		50.8		.509		MS
Sodium	ug/L	+/−20	25200		25500		1.29		MS
Thallium	ug/L	+/−20	49.6		49.8		.491		MS
Thorium	ug/L	+/−20	51.4		52.2		1.69		MS
Uranium−235	ug/L	+/−20	0.374		0.371		.618		MS
Uranium−238	ug/L	+/−20	51.1		51.4		.602		MS
Vanadium	ug/L	+/−20	49.6		49.9		.696		MS
Zinc	ug/L	+/−20	51.7		50.0		3.5		MS

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Duplicate Sample Summary

SDG No.: 541034 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S40−04092021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799647 **Duplicate ID:** 1204799648 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

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Duplicate Sample Summary

SDG No.: 541034 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S40−04092021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799652 **Duplicate ID:** 1204799653 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1940		1950		.973		MS
Antimony	ug/L	+/−20	51.5		51.8		.498		MS
Arsenic	ug/L	+/−20	47.8		48.8		2.22		MS
Barium	ug/L	+/−20	71.6		72.5		1.32		MS
Beryllium	ug/L	+/−20	52.4		52.6		.4		MS
Cadmium	ug/L	+/−20	50.0		50.3		.589		MS
Calcium	ug/L	+/−20	20100		20600		2.26		MS
Chromium	ug/L	+/−20	46.7		47.8		2.18		MS
Cobalt	ug/L	+/−20	47.8		48.5		1.52		MS
Copper	ug/L	+/−20	49.8		52.9		5.99		MS
Iron	ug/L	+/−20	2880		2950		2.56		MS
Lead	ug/L	+/−20	50.3		50.9		1.17		MS
Magnesium	ug/L	+/−20	6030		6140		1.88		MS
Manganese	ug/L	+/−20	8810		9040		2.62		MS
Molybdenum	ug/L	+/−20	52.6		52.9		.736		MS
Nickel	ug/L	+/−20	51.3		52.4		2.09		MS
Potassium	ug/L	+/−20	6230		6410		2.72		MS
Selenium	ug/L	+/−20	48.3		49.0		1.52		MS
Silver	ug/L	+/−20	50.7		51.3		1.13		MS
Sodium	ug/L	+/−20	24300		25000		2.84		MS
Thallium	ug/L	+/−20	50.1		50.5		.928		MS
Thorium	ug/L	+/−20	50.8		51.7		1.63		MS
Uranium−235	ug/L	+/−20	0.362		0.368		1.67		MS
Uranium−238	ug/L	+/−20	50.7		51.9		2.32		MS
Vanadium	ug/L	+/−20	48.1		49.2		2.33		MS
Zinc	ug/L	+/−20	49.4		51.6		4.32		MS

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Metals
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Duplicate Sample Summary

SDG No.: 541034 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S40−04092021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799652 **Duplicate ID:** 1204799653 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

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Laboratory Control Sample Summary

SDG NO. 541034

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799646								
	Aluminum	ug/L	2000	2000		100	80−120	MS
	Antimony	ug/L	50.0	48.9		97.8	80−120	MS
	Arsenic	ug/L	50.0	45.0		90	80−120	MS
	Barium	ug/L	50.0	50.3		101	80−120	MS
	Beryllium	ug/L	50.0	53.5		107	80−120	MS
	Cadmium	ug/L	50.0	49.3		98.5	80−120	MS
	Calcium	ug/L	2000	2100		105	80−120	MS
	Chromium	ug/L	50.0	48.3		96.7	80−120	MS
	Cobalt	ug/L	50.0	48.2		96.5	80−120	MS
	Copper	ug/L	50.0	51.4		103	80−120	MS
	Iron	ug/L	2000	1990		99.7	80−120	MS
	Lead	ug/L	50.0	49.8		99.7	80−120	MS
	Magnesium	ug/L	2000	2010		100	80−120	MS
	Manganese	ug/L	50.0	50.3		101	80−120	MS
	Molybdenum	ug/L	50.0	48.9		97.9	80−120	MS
	Nickel	ug/L	50.0	48.7		97.3	80−120	MS
	Potassium	ug/L	2000	2020		101	80−120	MS
	Selenium	ug/L	50.0	48.0		96.1	80−120	MS
	Silver	ug/L	50.0	50.1		100	80−120	MS
	Sodium	ug/L	2000	2140		107	80−120	MS
	Thallium	ug/L	50.0	49.1		98.3	80−120	MS
	Thorium	ug/L	50.0	50.9		102	80−120	MS
	Uranium−235	ug/L	0.360	0.358		99.5	80−120	MS
	Uranium−238	ug/L	49.6	49.8		100	80−120	MS
	Vanadium	ug/L	50.0	49.0		97.9	80−120	MS
	Zinc	ug/L	50.0	49.9		99.8	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

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Laboratory Control Sample Summary

SDG NO. 541034

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799651								
	Antimony	ug/L	50.0	49.4		98.7	80−120	MS
	Arsenic	ug/L	50.0	45.6		91.2	80−120	MS
	Barium	ug/L	50.0	49.0		98.1	80−120	MS
	Beryllium	ug/L	50.0	51.7		103	80−120	MS
	Aluminum	ug/L	2000	2020		101	80−120	MS
	Cadmium	ug/L	50.0	48.9		97.8	80−120	MS
	Calcium	ug/L	2000	2000		99.8	80−120	MS
	Chromium	ug/L	50.0	47.2		94.4	80−120	MS
	Cobalt	ug/L	50.0	47.5		95	80−120	MS
	Copper	ug/L	50.0	50.2		100	80−120	MS
	Iron	ug/L	2000	1980		99.2	80−120	MS
	Lead	ug/L	50.0	49.7		99.4	80−120	MS
	Magnesium	ug/L	2000	1950		97.6	80−120	MS
	Manganese	ug/L	50.0	49.1		98.2	80−120	MS
	Molybdenum	ug/L	50.0	49.1		98.3	80−120	MS
	Nickel	ug/L	50.0	47.5		95	80−120	MS
	Potassium	ug/L	2000	1960		97.9	80−120	MS
	Selenium	ug/L	50.0	48.5		97.1	80−120	MS
	Silver	ug/L	50.0	50.3		101	80−120	MS
	Sodium	ug/L	2000	2040		102	80−120	MS
	Thallium	ug/L	50.0	49.6		99.1	80−120	MS
	Thorium	ug/L	50.0	48.7		97.4	80−120	MS
	Uranium−235	ug/L	0.360	0.360		99.9	80−120	MS
	Uranium−238	ug/L	49.6	50.0		101	80−120	MS
	Vanadium	ug/L	50.0	47.7		95.4	80−120	MS
	Zinc	ug/L	50.0	48.7		97.5	80−120	MS

***Analytical Methods:**

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Serial Dilution Sample Summary

SDG NO. 541034 **Client ID** MW−S40−04092021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541034006 **Serial Dilution ID:** 1204799649

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	20.8		20.5		1.263			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	19200		19400		1.061		20	MS
Chromium	3	U	15	U				MS
Cobalt	.559	J	1.5	U	15.385			MS
Copper	.3	U	26.5					MS
Iron	866		840		3.023			MS
Lead	.5	U	2.5	U				MS
Magnesium	4400		4320		1.978		20	MS
Manganese	893		854		4.343		20	MS
Molybdenum	.673	J	1.11	J	64.933			MS
Nickel	4.85		4.85	J	.041			MS
Potassium	4610		4490		2.589			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	24500		23500		4.083		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.067	U	.335	U				MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	16.7	J				MS

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Serial Dilution Sample Summary

SDG NO. 541034 **Client ID** MW−S40−04092021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541034006 **Serial Dilution ID:** 1204799649

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541034 **Client ID** MW−S40−04092021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541034005 **Serial Dilution ID:** 1204799654

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	20.5		20.3		.631			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	18900		18300		3.13		20	MS
Chromium	3	U	15	U				MS
Cobalt	.584	J	1.5	U	5.308			MS
Copper	.3	U	1.5	U				MS
Iron	914		902		1.332			MS
Lead	.5	U	2.5	U				MS
Magnesium	4240		4020		5.177		20	MS
Manganese	870		837		3.763		20	MS
Molybdenum	.679	J	1.02	J	49.485			MS
Nickel	4.53		4.56	J	.596			MS
Potassium	4510		4210		6.637			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	23300		22700		2.585		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.067	U	.335	U				MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	19.3	J				MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 541034 **Client ID:** MW-S40-04092021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541034005 **Serial Dilution ID:** 1204799654

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 541034 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2117210							
1204799645	MB for batch 2117210	MB	G	20−APR−21	50mL	50mL	
1204799646	LCS for batch 2117210	LCS	G	20−APR−21	50mL	50mL	
1204799647	MW−S40−04092021S	MS	G	20−APR−21	50mL	50mL	
1204799648	MW−S40−04092021SD	MSD	G	20−APR−21	50mL	50mL	
541034001	PT−11P−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034002	PT−11P−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034003	GZW−7S−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034004	GZW−7S−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034006	MW−S40−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034007	HA20−CMT−2I−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034008	HA20−CMT−2I−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034009	MW−S18−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034010	MW−S18−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034011	MW−S04−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
Batch Number 2117213							
1204799650	MB for batch 2117213	MB	G	20−APR−21	50mL	50mL	
1204799651	LCS for batch 2117213	LCS	G	20−APR−21	50mL	50mL	
1204799652	MW−S40−04092021S	MS	G	20−APR−21	50mL	50mL	
1204799653	MW−S40−04092021SD	MSD	G	20−APR−21	50mL	50mL	

SW846

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 541034 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
541034005	MW−S40−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034012	MW−S04−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034013	EW−1−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034014	EW−1−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034015	MW−S20−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034016	MW−S20−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034017	MW−SD38−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034018	MW−SD38−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034019	GZW−7−1−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541034020	GZW−7−1−04092021	SAMPLE	G	20−APR−21	50mL	50mL	

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541034

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:25:16																							X	X		
S10	1	19:27:03																							X	X		
S100	1	19:28:50																							X	X		
ICV01	1	19:30:36																							X	X		
ICB01	1	19:32:24																							X	X		
CRDL01	1	19:34:12																							X	X		
ICSA01	1	19:36:00																							X	X		
ICSAB01	1	19:37:48																							X	X		
CCV01	1	19:39:36																							X	X		
CCB01	1	19:41:23																							X	X		
1204799645	1	19:43:11																							X	X		
1204799646	1	19:44:58																							X	X		
541034001	1	19:46:44																							X	X		
541034002	1	19:48:31																							X	X		
541034003	1	19:50:18																							X	X		
541034004	1	19:52:05																							X	X		
CCV02	1	19:53:52																							X	X		
CCB02	1	19:55:40																							X	X		
541034006	1	19:57:28																							X	X		
1204799647	1	19:59:14																							X	X		
1204799648	1	20:01:01																							X	X		
ZZZZZZ	1	20:02:48																										
1204799649	5	20:04:35																							X	X		
541034007	1	20:06:22																							X	X		
541034008	1	20:08:08																							X	X		
541034009	1	20:09:55																							X	X		
541034010	1	20:11:42																							X	X		
541034011	1	20:13:28																							X	X		
CCV03	1	20:15:16																							X	X		
CCB03	1	20:17:04																							X	X		
1204799650	1	20:18:51																							X	X		
1204799651	1	20:20:37																							X	X		
541034005	1	20:22:24																							X	X		
1204799652	1	20:24:11																							X	X		
1204799653	1	20:25:57																							X	X		
ZZZZZZ	1	20:27:44																										
1204799654	5	20:29:31																							X	X		
CCV04	1	20:31:18																							X	X		
CCB04	1	20:33:05																							X	X		
541034012	1	20:34:53																							X	X		
541034013	1	20:36:40																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541034

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541034014	1	20:38:26																							X	X		
ZZZZZZ	1	20:40:13																										
541034016	1	20:42:00																							X	X		
541034017	1	20:43:47																							X	X		
541034018	1	20:45:33																							X	X		
541034019	1	20:47:20																							X	X		
CCV05	1	20:49:07																							X	X		
CCB05	1	20:50:55																							X	X		
541034020	1	20:52:42																							X	X		
ZZZZZZ	1	20:54:29																										
ZZZZZZ	1	20:56:16																										
ZZZZZZ	1	20:58:02																										
ZZZZZZ	1	20:59:49																										
ZZZZZZ	1	21:01:35																										
ZZZZZZ	1	21:03:22																										
ZZZZZZ	1	21:05:09																										
ZZZZZZ	1	21:06:55																										
CCV06	1	21:08:42																							X	X		
CCB06	1	21:10:30																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541034

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 08-MAY-21

End Date: 09-MAY-21

Data File: 210508-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	22:14:41	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	22:18:18	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	22:21:54	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	22:25:31	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	22:29:07	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	22:32:43	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	22:36:19	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	22:39:55	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	22:43:32	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	22:47:08	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	22:50:45	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	22:54:21	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	22:57:58	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
1204799645	1	23:01:35	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X				X	X
1204799646	1	23:05:11	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X				X	X
541034001	1	23:08:48	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X				X	X
541034002	1	23:12:25	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X				X	X
541034003	1	23:16:00	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X				X	X
541034004	1	23:19:37	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X				X	X
CCV03	1	23:23:15	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	23:26:52	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034006	1	23:30:29	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X				X	X
1204799647	1	23:34:05	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X				X	X
1204799648	1	23:37:42	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X				X	X
ZZZZZZ	1	23:41:17																										
1204799649	5	23:44:53	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X				X	X
541034007	1	23:48:29	X	X	X	X	X	X		X	X			X	X	X	X	X	X	X	X		X				X	X
541034008	1	23:52:06	X	X	X	X	X	X		X	X			X	X		X	X	X	X	X		X				X	X
541034009	1	23:55:43	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X				X	X
541034010	1	23:59:20	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X				X	X
541034011	1	00:02:55	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X				X	X
CCV04	1	00:06:32	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	00:10:09	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
1204799650	1	00:13:46	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
1204799651	1	00:17:23	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
541034005	1	00:21:00	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
1204799652	1	00:24:35	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
1204799653	1	00:28:11	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:31:47																										
1204799654	5	00:35:23	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
CCV05	1	00:39:01	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL | **Client Sdg:** 541034

Inst Name: ICPMS15 | **Instrument Type:** MS

Start Date: 08-MAY-21 | **End Date:** 09-MAY-21 | **Data File:** 210508-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB05	1	00:42:38	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034012	1	00:46:15	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034013	1	00:49:52	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034014	1	00:53:28	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034015	1	00:57:05	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034016	1	01:00:41	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034017	1	01:04:17	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034018	1	01:07:53	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034019	1	01:11:28	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541034020	1	01:15:05	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCV06	1	01:18:44	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB06	1	01:22:21	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3   Uranium-234 abbreviated U4   Uranium-235 abbreviated U5
Uranium-236 abbreviated U6   Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541034

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-10

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:47:56							X							X						X						
S10	1	19:51:33							X							X						X						
S100	1	19:55:10							X							X						X						
ICV01	1	19:58:46							X							X						X						
ICB01	1	20:02:22							X							X						X						
CRDL01	1	20:05:59							X							X						X						
ICSA01	1	20:09:35							X							X						X						
ICSAB01	1	20:13:11							X							X						X						
CCV01	1	20:16:47							X							X						X						
CCB01	1	20:20:24							X							X						X						
LR01	1	20:24:01							X							X						X						
CCV02	1	20:27:37							X							X						X						
CCB02	1	20:31:14							X							X						X						
1204799645	1	20:34:50														X												
1204799646	1	20:38:27														X												
541034001	10	20:42:04																				X						
541034002	10	20:45:41																				X						
541034006	10	20:49:17														X												
1204799647	10	20:52:54														X												
1204799648	10	20:56:31														X												
1204799649	50	21:00:08														X												
541034007	10	21:03:44							X													X						
541034008	10	21:07:20							X							X						X						
CCV03	1	21:10:57							X							X						X						
CCB03	1	21:14:33							X							X						X						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541034

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-11

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	01:15:59														X												
S10	1	01:19:37														X												
S100	1	01:23:13														X												
ICV01	1	01:26:50														X												
ICB01	1	01:30:26														X												
CRDL01	1	01:34:03														X												
ICSA01	1	01:37:40														X												
ICSAB01	1	01:41:16														X												
CCV01	1	01:44:53														X												
CCB01	1	01:48:30														X												
LR01	1	01:52:07														X												
CCV02	1	01:55:44														X												
CCB02	1	01:59:21														X												
ZZZZZZ	1	02:02:57																										
ZZZZZZ	1	02:06:33																										
ZZZZZZ	1	02:10:09																										
ZZZZZZ	1	02:13:45																										
ZZZZZZ	1	02:17:21																										
ZZZZZZ	1	02:20:56																										
ZZZZZZ	5	02:24:32																										
ZZZZZZ	1	02:28:08																										
ZZZZZZ	1	02:31:44																										
CCV	1	02:35:20														X												
CCB	1	02:38:56														X												
ZZZZZZ	1	02:42:32																										
ZZZZZZ	1	02:46:08																										
ZZZZZZ	1	02:49:44																										
ZZZZZZ	1	02:53:20																										
ZZZZZZ	1	02:56:56																										
ZZZZZZ	1	03:00:32																										
ZZZZZZ	1	03:04:07																										
ZZZZZZ	1	03:07:43																										
CCV	1	03:11:19														X												
CCB	1	03:14:56														X												
ZZZZZZ	1	03:18:32																										
ZZZZZZ	1	03:22:08																										
ZZZZZZ	1	03:25:43																										
ZZZZZZ	1	03:29:19																										
ZZZZZZ	1	03:32:55																										
ZZZZZZ	1	03:36:31																										
ZZZZZZ	1	03:40:07																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541034

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-11

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZZ	1	03:43:43																										
ZZZZZZZ	1	03:47:18																										
CCV	1	03:50:55														X												
CCB	1	03:54:32														X												
ZZZZZZZ	1	03:58:09																										
ZZZZZZZ	1	04:01:45																										
ZZZZZZZ	10	04:05:21																										
ZZZZZZZ	10	04:08:56																										
ZZZZZZZ	10	04:12:32																										
ZZZZZZZ	10	04:16:08																										
ZZZZZZZ	10	04:19:44																										
ZZZZZZZ	50	04:23:20																										
ZZZZZZZ	10	04:26:56																										
ZZZZZZZ	10	04:30:32																										
CCV03	1	04:34:09														X												
CCB03	1	04:37:45														X												
1204799650	1	04:41:22														X												
1204799651	1	04:44:58														X												
541034005	10	04:48:34														X												
1204799652	10	04:52:10														X												
1204799653	10	04:55:46														X												
1204799654	50	04:59:22														X												
CCV04	1	05:02:58														X												
CCB04	1	05:06:35														X												

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541034

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	11:38:45																							X	X		
S10	1	11:40:32																							X	X		
S100	1	11:42:18																							X	X		
ICV01	1	11:44:04																							X	X		
ICB01	1	11:45:51																							X	X		
CRDL01	1	11:47:38																							X	X		
ICSA01	1	11:49:26																							X	X		
ICSAB01	1	11:51:14																							X	X		
CCV01	1	11:53:01																							X	X		
CCB01	1	11:54:49																							X	X		
ZZZZZZ	1	11:56:35																										
ZZZZZZ	1	11:58:22																										
541034015	1	12:00:10																							X	X		
ZZZZZZ	1	12:01:59																										
ZZZZZZ	2	12:03:46																										
ZZZZZZ	2	12:05:33																										
CCV02	1	12:07:21																							X	X		
CCB02	1	12:09:09																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541034

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	12:57:04										X	X											X				
S10	1	12:59:04										X	X											X				
S100	1	13:01:04										X	X											X				
ICV01	1	13:03:03										X	X											X				
ICB01	1	13:05:03										X	X											X				
CRDL01	1	13:07:03										X	X											X				
ICSA01	1	13:09:02										X	X											X				
ICSAB01	1	13:11:02										X	X											X				
CCV01	1	13:13:01										X	X											X				
CCB01	1	13:15:01										X	X											X				
LR01	1	13:17:00										X	X											X				
CCV02	1	13:19:00										X	X											X				
CCB02	1	13:20:59										X	X											X				
1204799650	1	13:22:59										X	X															
1204799651	1	13:24:59										X	X															
541034005	1	13:26:59										X	X															
1204799652	1	13:28:59										X	X															
1204799653	1	13:33:14										X	X															
ZZZZZZ	1	13:35:13																										
1204799654	5	13:37:13										X	X															
CCV03	1	13:39:13										X	X											X				
CCB03	1	13:41:13										X	X											X				
541034012	1	13:43:13										X	X															
541034013	1	13:45:13										X	X															
541034014	1	13:47:12										X	X															
541034015	1	13:49:12										X																
541034016	1	13:51:11										X	X															
541034017	1	13:53:10										X	X															
541034018	1	13:55:09										X	X															
541034019	1	13:57:08										X	X															
541034020	1	13:59:07										X	X															
CCV04	1	14:01:08										X	X											X				
CCB04	1	14:03:07										X	X											X				
ZZZZZZ	1	14:05:08																										
ZZZZZZ	1	14:07:08																										
ZZZZZZ	1	14:09:07																										
ZZZZZZ	1	14:11:07																										
ZZZZZZ	1	14:13:06																										
ZZZZZZ	10	14:15:07																										
ZZZZZZ	1	14:17:07																										
ZZZZZZ	10	14:19:07																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541034

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	14:21:07																										
ZZZZZZ	1	14:23:07																										
CCV05	1	14:25:08										X	X											X				
CCB05	1	14:27:08										X	X											X				
1204799645	1	14:29:08										X	X											X				
1204799646	1	14:31:08										X	X											X				
541034001	1	14:33:07										X	X											X				
541034002	1	14:35:07										X	X											X				
541034003	1	14:37:06										X	X											X				
541034004	1	14:39:05										X	X											X				
CCV06	1	14:41:05										X	X											X				
CCB06	1	14:43:05										X	X											X				
541034006	1	14:45:06										X	X											X				
1204799647	1	14:47:05										X	X											X				
1204799648	1	14:49:05										X	X											X				
ZZZZZZ	1	14:51:04																										
1204799649	5	14:53:04										X	X											X				
541034007	1	14:55:04										X	X											X				
541034008	1	14:57:03										X	X											X				
541034009	1	14:59:03										X	X											X				
541034010	1	15:01:03										X	X											X				
541034011	1	15:03:02										X	X											X				
CCV07	1	15:05:03										X	X											X				
CCB07	1	15:07:03										X	X											X				
ZZZZZZ	1	15:09:04																										
ZZZZZZ	1	15:11:04																										
ZZZZZZ	1	15:13:03																										
ZZZZZZ	1	15:15:03																										
ZZZZZZ	1	15:17:02																										
ZZZZZZ	1	15:19:01																										
ZZZZZZ	5	15:21:00																										
ZZZZZZ	1	15:22:59																										
ZZZZZZ	1	15:24:58																										
ZZZZZZ	1	15:26:57																										
CCV	1	15:28:57										X	X											X				
CCB	1	15:30:56										X	X											X				
ZZZZZZ	1	15:32:56																										
ZZZZZZ	1	15:34:55																										
ZZZZZZ	1	15:36:54																										
ZZZZZZ	1	15:38:54																										
ZZZZZZ	1	15:40:54																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541034

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	15:42:53																										
ZZZZZZ	1	15:44:53																										
ZZZZZZ	1	15:46:52																										
CCV	1	15:48:52										X	X											X				
CCB	1	15:50:52										X	X											X				
ZZZZZZ	1	15:52:53																										
ZZZZZZ	1	15:54:52																										
ZZZZZZ	1	15:56:52																										
ZZZZZZ	1	15:58:51																										
ZZZZZZ	1	16:00:51																										
ZZZZZZ	1	16:02:51																										
ZZZZZZ	1	16:04:50																										
ZZZZZZ	1	16:06:50																										
CCV08	1	16:08:51										X	X											X				
CCB08	1	16:10:51										X	X											X				
ZZZZZZ	10	17:14:39																										
541034015	10	17:17:01											X															
CCV09	1	17:19:03										X	X											X				
CCB09	1	17:21:02										X	X											X				

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
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Instrument Detection Limits

SDG NO. 541034

Contract: DMAX00801 **Lab Code:** **GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 541034

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117210**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799646	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799646	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799647	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799647	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799648	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799648	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204799645 MB	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799646 LCS	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034001	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034002	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034003	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034004	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034006	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799649 SDILT (541034006)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799647 MS (541034006)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799648 MSD (541034006)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034007	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034008	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034009	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034010	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034011	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3267483	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 91 C
Temperature within limits (Y/N)?: y
Thermometer ID: 12411
Hot Block ID: 14
Digestion tube lot #: 2012333

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: 2117213
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799651	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799651	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799652	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799652	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799653	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799653	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204799650 MB	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799651 LCS	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034005	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799654 SDILT (541034005)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799652 MS (541034005)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799653 MSD (541034005)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034012	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034013	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034014	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034015	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034016	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034017	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034018	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034019	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034020	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036001	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036002	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036003	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036004	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036005	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036006	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036007	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036008	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3267483	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 94 C
Temperature within limits (Y/N)?: y
Thermometer ID: 118631
Hot Block ID: 2
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 12, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541036

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 16, 2021 and April 17, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04092021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541036

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Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541036

May 12, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 16, 2021 and April 17, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541036001	MW-S23-04092021
541036002	MW-S23-04092021
541036003	HA20-CMT-3S-04092021
541036004	HA20-CMT-3S-04092021
541036005	MW-SD35-04092021
541036006	MW-SD35-04092021
541036007	MW-BS35-04092021
541036008	MW-BS35-04092021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Project # 3252H
GEL Quote #: GELP18-1125
COC Number (1): 04092021
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541036

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	NI Total Metals (6020A ICP-MS)	NI Dissolved Metals (6020A ICP-MS)	NI U-235/U-238 plus Total U Calc.								<-- Preservative Type (6) Comments Note: extra sample is required for sample specific QC
MW-S23-04092021	4/9/2021	15:55	N	Y	GW	U238		2	X	X	X								Total and Diss. ICP-MS List:
HA20-CMT-3S-04092021	4/9/2021	14:40	N	Y	GW	U238		2	X	X	X								
MW-SD35-04092021	4/9/2021	15:40	N	Y	GW	U238		2	X	X	X								Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
MW-BS35-04092021	4/9/2021	13:15	N	Y	GW	U238		2	X	X	X								U-235/U-238 plus Total U Calc. for Total and Dissolved

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 [signature]	4/13/21	11:00	1 [signature]	4/13/21	1100
2 [signature]	4/15/21	1500	2 [signature]	4/16/21	925
3			3		

TAT Requested: Normal: X Rush: ____ Specify: ________
Fax Results: [ ] Yes [X] No
Select Deliverable: [X] C of A [X] QC Summary [X] Level 5
Additional Remarks:
For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ **°C**

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* **- 3**, *6010B/7470A* **- 1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via NaI mm

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541036
Received By: STACY BOONE	Date Received: APRIL 16, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 5252 3063 4°c 7734 5252 3637 3°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: see above
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	~~✓~~ 4/19/21		✓	Circle Applicable: No container count on COC Other (describe) See Below
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

-Missing Cooler 7734 5252 4070

7734 5252 3512 4°c 7734 5252 3420 3°c

PM (or PMA) review: Initials DS Date 4/19/21 Page 1 of 1

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GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541036
Received By: Stacy Boone	Date Received: April 17, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 5252 4070

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 3°C
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

* Rec'd Missing samples from 4/14

PM (or PMA) review: Initials MB Date 4/20/21 Page 1 of 1

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Work Order Containers

Sample ID: **541036001**
Client Sample ID: **MW−S23−04092021**
Description: **Ground Water**

Label: 541036001.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541036001.01.01 **Type: New Undefined**

08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541036002**
Client Sample ID: **MW−S23−04092021**
Description: **Dissolved Ground Water**

Label: 541036002.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541036002.01.01 **Type: New Undefined**

08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541036003**
Client Sample ID: **HA20−CMT−3S−04092021**
Description: **Ground Water**

Label: 541036003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to

Work Order Containers

Sample ID: **541036003**
Client Sample ID: **HA20−CMT−3S−04092021**
Description: **Ground Water**

Label: 541036003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541036003.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541036004**
Client Sample ID: **HA20−CMT−3S−04092021**
Description: **Dissolved Ground Water**

Label: 541036004.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541036004.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541036005**
Client Sample ID: **MW−SD35−04092021**
Description: **Ground Water**

Label: 541036005.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541036005**
Client Sample ID: **MW−SD35−04092021**
Description: **Ground Water**

Label: 541036005.01.01 **Type: New Undefined**

08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541036006**
Client Sample ID: **MW−SD35−04092021**
Description: **Dissolved Ground Water**

Label: 541036006.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541036006.01.01 **Type: New Undefined**

08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541036007**
Client Sample ID: **MW−BS35−04092021**
Description: **Ground Water**

Label: 541036007.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541036007.01.01 **Type: New Undefined**

08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541036008**
Client Sample ID: **MW−BS35−04092021**
Description: **Dissolved Ground Water**

Label: 541036008.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:36:18	Hannah Hatherly	Transfered custody to batch 2117213
19−APR−21 19:36:18	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117213 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541036008.01.01	**Type: New Undefined**	
08−MAY−21 17:15:34	Paul Boyd	Transfered custody to batch 2117214
08−MAY−21 17:15:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 12 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541036

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batch:</u> 2117214

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2126937

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batch:</u> 2117213

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541036001	MW-S23-04092021
541036002	MW-S23-04092021
541036003	HA20-CMT-3S-04092021
541036004	HA20-CMT-3S-04092021
541036005	MW-SD35-04092021
541036006	MW-SD35-04092021
541036007	MW-BS35-04092021
541036008	MW-BS35-04092021
1204799650	Method Blank (MB)**ICP-MS**
1204799651	Laboratory Control Sample (LCS)
1204799654	541034005(MW-S40-04092021L) Serial Dilution (SD)
1204799652	541034005(MW-S40-04092021S) Matrix Spike (MS)
1204799653	541034005(MW-S40-04092021SD) Matrix Spike Duplicate (MSD)

Samples 541036001, 002, 003, 004, 005, 006, 007 and 008 in this SDG were analyzed for metals on an "as received" basis.

<u>Data Summary:</u>

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

<u>Calibration Information</u>

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541036001 (MW-S23-04092021), 541036002 (MW-S23-04092021), 541036003 (HA20-CMT-3S-04092021), 541036004 (HA20-CMT-3S-04092021), 541036005 (MW-SD35-04092021) and 541036006 (MW-SD35-04092021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541036					
	001	**002**	**003**	**004**	**005**	**006**
Iron	1X	1X	1X	1X	10X	10X
Sodium	10X	10X	10X	10X	1X	1X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541036 GEL Work Order: 541036

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
** Indicates analyte is a surrogate compound.
J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Jamie Johnson**

Date: 13 MAY 2021 **Title: Group Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541036 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541036001 **BASIS:** As Received **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-S23-04092021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	472	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-38-2	Arsenic	2.31	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-39-3	Barium	38.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-70-2	Calcium	8960	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-48-4	Cobalt	1.72	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-50-8	Copper	0.992	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:05	210509-3	2117214
7439-89-6	Iron	594	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:05	210509-3	2117214
7439-92-1	Lead	0.773	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7439-95-4	Magnesium	865	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7439-96-5	Manganese	67.6	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-02-0	Nickel	0.823	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-09-7	Potassium	9870	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-23-5	Sodium	62300	ug/L		800	2500	2500	10	MS	PRB	05/10/21 05:10	210509-7	2117214
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-61-1	Total Uranium	0.539	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:54	210508-1	2117214
7440-61-1	Uranium-238	0.539	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:54	210508-1	2117214
7440-62-2	Vanadium	4.03	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:25	210508-2	2117214
7440-66-6	Zinc	4.18	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:25	210508-2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541036 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541036002 **BASIS:** Filtered **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-S23-04092021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-39-3	Barium	27.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-70-2	Calcium	8150	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-50-8	Copper	0.424	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:07	210509-3	2117214
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 14:07	210509-3	2117214
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7439-95-4	Magnesium	740	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7439-96-5	Manganese	2.13	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-09-7	Potassium	9900	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-23-5	Sodium	57900	ug/L		800	2500	2500	10	MS	PRB	05/10/21 05:13	210509-7	2117214
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-61-1	Total Uranium	0.0717	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:56	210508-1	2117214
7440-61-1	Uranium-238	0.0717	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:56	210508-1	2117214
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:29	210508-2	2117214
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:29	210508-2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541036 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541036003 **BASIS:** As Received **DATE COLLECTED** 09−APR−21

CLIENT ID: HA20−CMT−3S−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	45.4	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−38−2	Arsenic	3.25	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−39−3	Barium	25.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−70−2	Calcium	26600	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−48−4	Cobalt	0.550	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−50−8	Copper	0.862	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:09	210509−3	2117214
7439−89−6	Iron	158	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:09	210509−3	2117214
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7439−95−4	Magnesium	4260	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7439−96−5	Manganese	812	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7439−98−7	Molybdenum	64.2	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−09−7	Potassium	5600	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−23−5	Sodium	70400	ug/L		800	2500	2500	10	MS	PRB	05/10/21 05:17	210509−7	2117214
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−61−1	Total Uranium	58.6	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.139	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:58	210508−1	2117214
7440−61−1	Uranium−238	58.5	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:58	210508−1	2117214
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:33	210508−2	2117214
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:33	210508−2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541036 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541036004 **BASIS:** Filtered **DATE COLLECTED** 09−APR−21

CLIENT ID: HA20−CMT−3S−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−38−2	Arsenic	2.96	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−39−3	Barium	24.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−70−2	Calcium	26100	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−48−4	Cobalt	0.513	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−50−8	Copper	0.516	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:11	210509−3	2117214
7439−89−6	Iron	97.2	ug/L	J	33.0	100	100	1	MS	PRB	05/09/21 14:11	210509−3	2117214
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7439−95−4	Magnesium	4130	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7439−96−5	Manganese	802	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7439−98−7	Molybdenum	62.5	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−09−7	Potassium	5400	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−23−5	Sodium	67900	ug/L		800	2500	2500	10	MS	PRB	05/10/21 05:21	210509−7	2117214
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−61−1	Total Uranium	54.0	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.129	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 20:59	210508−1	2117214
7440−61−1	Uranium−238	53.9	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 20:59	210508−1	2117214
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:36	210508−2	2117214
7440−66−6	Zinc	5.81	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:36	210508−2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541036 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541036005 **BASIS:** As Received **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-SD35-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	113	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-39-3	Barium	53.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-70-2	Calcium	29400	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-48-4	Cobalt	1.68	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-50-8	Copper	0.820	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:13	210509-3	2117214
7439-89-6	Iron	17400	ug/L		330	1000	1000	10	MS	PRB	05/10/21 05:24	210509-7	2117214
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7439-95-4	Magnesium	10400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7439-96-5	Manganese	786	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7439-98-7	Molybdenum	0.516	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-02-0	Nickel	1.44	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-09-7	Potassium	5620	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-23-5	Sodium	12600	ug/L		80.0	250	250	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-61-1	Total Uranium	0.114	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:01	210508-1	2117214
7440-61-1	Uranium-238	0.114	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:01	210508-1	2117214
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:40	210508-2	2117214
7440-66-6	Zinc	20.8	ug/L		3.30	20.0	20.0	1	MS	PRB	05/09/21 01:40	210508-2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541036 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541036006 **BASIS:** Filtered **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-SD35-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	51.6	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-39-3	Barium	51.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-70-2	Calcium	29400	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-48-4	Cobalt	1.46	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-50-8	Copper	0.467	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:17	210509-3	2117214
7439-89-6	Iron	16500	ug/L		330	1000	1000	10	MS	PRB	05/10/21 05:28	210509-7	2117214
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7439-95-4	Magnesium	10200	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7439-96-5	Manganese	726	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7439-98-7	Molybdenum	0.343	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-02-0	Nickel	1.26	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-09-7	Potassium	5640	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-23-5	Sodium	12500	ug/L		80.0	250	250	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:03	210508-1	2117214
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:03	210508-1	2117214
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:44	210508-2	2117214
7440-66-6	Zinc	10.2	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:44	210508-2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541036 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541036007 **BASIS:** As Received **DATE COLLECTED** 09−APR−21

CLIENT ID: MW−BS35−04092021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	308	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−39−3	Barium	23.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−70−2	Calcium	15300	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−48−4	Cobalt	0.301	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−50−8	Copper	0.715	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:21	210509−3	2117214
7439−89−6	Iron	989	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:21	210509−3	2117214
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7439−95−4	Magnesium	4910	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7439−96−5	Manganese	41.8	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7439−98−7	Molybdenum	5.62	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−02−0	Nickel	0.975	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−09−7	Potassium	4860	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−23−5	Sodium	14500	ug/L		80.0	250	250	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−61−1	Total Uranium	0.225	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:05	210508−1	2117214
7440−61−1	Uranium−238	0.225	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:05	210508−1	2117214
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:47	210508−2	2117214
7440−66−6	Zinc	6.42	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:47	210508−2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541036 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541036008 **BASIS:** Filtered **DATE COLLECTED** 09-APR-21

CLIENT ID: MW-BS35-04092021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-39-3	Barium	20.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-70-2	Calcium	15300	ug/L		80.0	200	200	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 14:23	210509-3	2117214
7439-89-6	Iron	207	ug/L		33.0	100	100	1	MS	PRB	05/09/21 14:23	210509-3	2117214
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7439-95-4	Magnesium	4760	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7439-96-5	Manganese	28.2	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7439-98-7	Molybdenum	6.02	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-09-7	Potassium	4710	ug/L		80.0	300	300	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-23-5	Sodium	14300	ug/L		80.0	250	250	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-61-1	Total Uranium	0.170	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:06	210508-1	2117214
7440-61-1	Uranium-238	0.170	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:06	210508-1	2117214
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:51	210508-2	2117214
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 01:51	210508-2	2117214

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117214	2117213	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.4	90.0 − 110.0	MS	08−MAY−21 19:30	210508−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 19:30	210508−1
	Aluminum	5040	ug/L	5050	ug/L	99.8	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Antimony	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Arsenic	48.6	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Barium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Beryllium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Cadmium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Calcium	4970	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Chromium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Cobalt	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Magnesium	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Manganese	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Molybdenum	48.7	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Nickel	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Potassium	5080	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Selenium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Silver	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Sodium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Thallium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Thorium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Vanadium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Zinc	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Copper	52	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	09−MAY−21 13:03	210509−3
	Iron	5010	ug/L	5000	ug/L	100.1	90.0 − 110.0	MS	09−MAY−21 13:03	210509−3
	Iron	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	10−MAY−21 01:26	210509−7
	Manganese	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 01:26	210509−7
	Sodium	5110	ug/L	5000	ug/L	102.1	90.0 − 110.0	MS	10−MAY−21 01:26	210509−7
CCV01										
	Uranium−235	0.37	ug/L	0.36	ug/L	102	90.0 − 110.0	MS	08−MAY−21 19:39	210508−1

METALS
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Initial and Continuing Calibration Verification

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 19:39	210508−1
	Aluminum	5000	ug/L	5050	ug/L	99	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Antimony	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Arsenic	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Barium	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Beryllium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Cadmium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Calcium	4870	ug/L	5000	ug/L	97.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Chromium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Cobalt	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Lead	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Magnesium	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Manganese	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Molybdenum	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Nickel	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Potassium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Selenium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Silver	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Sodium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Thallium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Thorium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Vanadium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Zinc	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Copper	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 13:13	210509−3
	Iron	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	09−MAY−21 13:13	210509−3
	Iron	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	10−MAY−21 01:44	210509−7
	Manganese	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	10−MAY−21 01:44	210509−7
	Sodium	5250	ug/L	5000	ug/L	104.9	90.0 − 110.0	MS	10−MAY−21 01:44	210509−7
CCV02										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.6	90.0 − 110.0	MS	08−MAY−21 20:15	210508−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 20:15	210508−1

METALS
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Initial and Continuing Calibration Verification

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Aluminum	5080	ug/L	5050	ug/L	100.5	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Antimony	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Arsenic	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Barium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Beryllium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Cadmium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Calcium	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Chromium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Cobalt	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Lead	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Manganese	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Molybdenum	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Nickel	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Potassium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Selenium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Silver	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Sodium	5240	ug/L	5000	ug/L	104.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Thallium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Thorium	54.9	ug/L	50	ug/L	109.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Vanadium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Zinc	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Copper	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	09−MAY−21 13:19	210509−3
	Iron	5090	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	09−MAY−21 13:19	210509−3
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	10−MAY−21 01:55	210509−7
	Manganese	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	10−MAY−21 01:55	210509−7
	Sodium	5200	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	10−MAY−21 01:55	210509−7
CCV03										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.2	90.0 − 110.0	MS	08−MAY−21 20:31	210508−1
	Uranium−238	51.6	ug/L	49.64	ug/L	104	90.0 − 110.0	MS	08−MAY−21 20:31	210508−1
	Aluminum	5030	ug/L	5050	ug/L	99.5	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Antimony	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Arsenic	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Barium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Beryllium	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Cadmium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Calcium	4920	ug/L	5000	ug/L	98.4	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Chromium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Cobalt	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Lead	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Magnesium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Manganese	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Molybdenum	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Nickel	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Potassium	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Selenium	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Silver	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Sodium	5090	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Thorium	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Vanadium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Zinc	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	09−MAY−21 00:06	210508−2
	Copper	53.6	ug/L	50	ug/L	107.3	90.0 − 110.0	MS	09−MAY−21 13:39	210509−3
	Iron	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	09−MAY−21 13:39	210509−3
	Iron	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	10−MAY−21 04:34	210509−7
	Manganese	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	10−MAY−21 04:34	210509−7
	Sodium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	10−MAY−21 04:34	210509−7
CCV04										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.1	90.0 − 110.0	MS	08−MAY−21 20:49	210508−1
	Uranium−238	51.2	ug/L	49.64	ug/L	103.2	90.0 − 110.0	MS	08−MAY−21 20:49	210508−1
	Aluminum	4910	ug/L	5050	ug/L	97.2	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Antimony	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Arsenic	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Barium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Beryllium	48.2	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Cadmium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Calcium	4850	ug/L	5000	ug/L	97	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Chromium	48.2	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Cobalt	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Lead	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Magnesium	4900	ug/L	5000	ug/L	97.9	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Manganese	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Molybdenum	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Nickel	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Selenium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Silver	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Sodium	5000	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Thallium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Thorium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Vanadium	48.6	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Zinc	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	09−MAY−21 00:39	210508−2
	Copper	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	09−MAY−21 14:01	210509−3
	Iron	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	09−MAY−21 14:01	210509−3
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	10−MAY−21 05:02	210509−7
	Manganese	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	10−MAY−21 05:02	210509−7
	Sodium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	10−MAY−21 05:02	210509−7
CCV05										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.8	90.0 − 110.0	MS	08−MAY−21 21:08	210508−1
	Uranium−238	50.9	ug/L	49.64	ug/L	102.6	90.0 − 110.0	MS	08−MAY−21 21:08	210508−1
	Aluminum	4870	ug/L	5050	ug/L	96.5	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Antimony	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Arsenic	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Beryllium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Cadmium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Calcium	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Chromium	47.6	ug/L	50	ug/L	95.3	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Cobalt	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Lead	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Magnesium	4840	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Manganese	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Molybdenum	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Nickel	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Potassium	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Selenium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Silver	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Sodium	4970	ug/L	5000	ug/L	99.3	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Thallium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Thorium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Vanadium	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Zinc	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	09−MAY−21 01:18	210508−2
	Copper	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	09−MAY−21 14:25	210509−3
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	09−MAY−21 14:25	210509−3
	Iron	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	10−MAY−21 05:31	210509−7
	Manganese	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	10−MAY−21 05:31	210509−7
	Sodium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	10−MAY−21 05:31	210509−7
CCV06										
	Aluminum	4880	ug/L	5050	ug/L	96.6	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Antimony	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Arsenic	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Barium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Beryllium	48.2	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Cadmium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Calcium	4740	ug/L	5000	ug/L	94.8	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Chromium	47.7	ug/L	50	ug/L	95.5	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Cobalt	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Lead	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Magnesium	4850	ug/L	5000	ug/L	97	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Manganese	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Molybdenum	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Nickel	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Potassium	4780	ug/L	5000	ug/L	95.7	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Selenium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Silver	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Sodium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Thorium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Vanadium	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Zinc	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0016	ug/L	.0014	ug/L	114.3	80.0 − 120.0	MS	08−MAY−21 19:34	210508−1
	Uranium−238	.206	ug/L	.2	ug/L	103	80.0 − 120.0	MS	08−MAY−21 19:34	210508−1
	Aluminum	50.7	ug/L	50	ug/L	101.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Antimony	3.07	ug/L	3	ug/L	102.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Arsenic	4.87	ug/L	5	ug/L	97.4	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Barium	4.19	ug/L	4	ug/L	104.7	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Beryllium	.563	ug/L	.5	ug/L	112.6	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Cadmium	1.01	ug/L	1	ug/L	101.4	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Calcium	230	ug/L	200	ug/L	115.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Chromium	10.1	ug/L	10	ug/L	101.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Cobalt	1.04	ug/L	1	ug/L	103.7	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Lead	2.1	ug/L	2	ug/L	105.1	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Magnesium	31.2	ug/L	30	ug/L	104.1	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Manganese	5.09	ug/L	5	ug/L	101.8	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Molybdenum	1.02	ug/L	1	ug/L	102.1	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Nickel	2.09	ug/L	2	ug/L	104.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Potassium	307	ug/L	300	ug/L	102.4	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Selenium	4.78	ug/L	5	ug/L	95.6	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Silver	1.02	ug/L	1	ug/L	101.9	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Sodium	266	ug/L	250	ug/L	106.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Thallium	2.04	ug/L	2	ug/L	102.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Thorium	2.21	ug/L	2	ug/L	110.5	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Vanadium	20.3	ug/L	20	ug/L	101.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Zinc	19.5	ug/L	20	ug/L	97.7	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Copper	2.2	ug/L	2	ug/L	110	80.0 − 120.0	MS	09−MAY−21 13:07	210509−3
	Iron	103	ug/L	100	ug/L	102.6	80.0 − 120.0	MS	09−MAY−21 13:07	210509−3
	Iron	99.2	ug/L	100	ug/L	99.2	80.0 − 120.0	MS	10−MAY−21 01:34	210509−7
	Manganese	5.01	ug/L	5	ug/L	100.2	80.0 − 120.0	MS	10−MAY−21 01:34	210509−7
	Sodium	259	ug/L	250	ug/L	103.6	80.0 − 120.0	MS	10−MAY−21 01:34	210509−7

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541036

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	08−MAY−21 19:32	210508−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	08−MAY−21 19:32	210508−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	08−MAY−21 22:29	210508−2
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	08−MAY−21 22:29	210508−2
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	08−MAY−21 22:29	210508−2
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	08−MAY−21 22:29	210508−2
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	09−MAY−21 13:05	210509−3
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	09−MAY−21 13:05	210509−3
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	10−MAY−21 01:30	210509−7
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	10−MAY−21 01:30	210509−7
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	10−MAY−21 01:30	210509−7
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 19:41	210508−1

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541036

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 19:41	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	08−MAY−21 22:47	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	08−MAY−21 22:47	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Molybdenum	0.768	+/−1	J	0.2	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	08−MAY−21 22:47	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	08−MAY−21 22:47	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 13:15	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 13:15	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 01:48	210509−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 01:48	210509−7
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 01:48	210509−7
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 20:17	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 20:17	210508−1

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541036

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	08−MAY−21 22:57	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	08−MAY−21 22:57	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Molybdenum	0.56	+/−1	J	0.2	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	08−MAY−21 22:57	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	08−MAY−21 22:57	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Thorium	0.958	+/−2	J	0.7	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 13:20	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 13:20	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 01:59	210509−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 01:59	210509−7
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 01:59	210509−7
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 20:33	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 20:33	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 00:10	210508−2

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541036

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 00:10	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 00:10	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 00:10	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 00:10	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 00:10	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 13:41	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 13:41	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 04:37	210509−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 04:37	210509−7
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 04:37	210509−7
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 20:50	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 20:50	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 00:42	210508−2

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541036

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 00:42	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 00:42	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 00:42	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 00:42	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 00:42	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 14:03	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 14:03	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 05:06	210509−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 05:06	210509−7
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 05:06	210509−7
CCB05										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 21:10	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 21:10	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 01:22	210508−2

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541036

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 01:22	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 01:22	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 01:22	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 01:22	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 01:22	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 14:27	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 14:27	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 05:35	210509−7
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 05:35	210509−7
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 05:35	210509−7
CCB06										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 01:58	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:58	210508−2

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541036

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 01:58	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 01:58	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 01:58	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 01:58	210508−2

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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PREPARATION BLANK SUMMARY

SDG NO. 541036

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204799650								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					08−MAY−21 19:36	210508−1
	Uranium−238	0.024	ug/L					08−MAY−21 19:36	210508−1
ICSAB01									
	Uranium−235	0.144	ug/L	.145	ug/L	99	80.0 − 120.0	08−MAY−21 19:37	210508−1
	Uranium−238	20.0	ug/L	19.86	ug/L	101	80.0 − 120.0	08−MAY−21 19:37	210508−1

SW846

METALS
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Interference Check Sample

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	90100	ug/L	100000	ug/L	90.1	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Antimony	0.131	ug/L					08−MAY−21 22:36	210508−2
	Arsenic	0.128	ug/L					08−MAY−21 22:36	210508−2
	Barium	2.56	ug/L					08−MAY−21 22:36	210508−2
	Beryllium	0.003	ug/L					08−MAY−21 22:36	210508−2
	Cadmium	0.878	ug/L					08−MAY−21 22:36	210508−2
	Calcium	93600	ug/L	100000	ug/L	93.6	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Chromium	0.78	ug/L					08−MAY−21 22:36	210508−2
	Cobalt	0.47	ug/L					08−MAY−21 22:36	210508−2
	Lead	0.214	ug/L					08−MAY−21 22:36	210508−2
	Magnesium	89700	ug/L	100000	ug/L	89.7	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Manganese	4.69	ug/L					08−MAY−21 22:36	210508−2
	Molybdenum	1930	ug/L	2000	ug/L	96.5	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Nickel	0.419	ug/L					08−MAY−21 22:36	210508−2
	Potassium	90700	ug/L	100000	ug/L	90.7	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Selenium	−0.007	ug/L					08−MAY−21 22:36	210508−2
	Silver	0.14	ug/L					08−MAY−21 22:36	210508−2
	Sodium	99700	ug/L	100000	ug/L	99.7	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Thallium	0.101	ug/L					08−MAY−21 22:36	210508−2
	Thorium	1.8	ug/L					08−MAY−21 22:36	210508−2
	Vanadium	0.002	ug/L					08−MAY−21 22:36	210508−2
	Zinc	3.09	ug/L					08−MAY−21 22:36	210508−2
ICSAB01									
	Aluminum	90000	ug/L	100000	ug/L	90	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Antimony	20.6	ug/L	20	ug/L	103	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Arsenic	20.4	ug/L	20	ug/L	102	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Barium	21.7	ug/L	22.35	ug/L	96.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Beryllium	18.2	ug/L	20	ug/L	91	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Cadmium	20.2	ug/L	20.72	ug/L	97.5	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Calcium	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	08−MAY−21 22:39	210508−2

METALS
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Interference Check Sample

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Chromium	19.8	ug/L	20	ug/L	98.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Cobalt	19.1	ug/L	20.65	ug/L	92.3	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Lead	19.1	ug/L	20	ug/L	95.5	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Magnesium	88100	ug/L	100000	ug/L	88.1	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Manganese	23.6	ug/L	25.72	ug/L	91.6	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Molybdenum	1960	ug/L	2000	ug/L	97.8	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Nickel	18.4	ug/L	20	ug/L	91.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Potassium	89900	ug/L	100000	ug/L	89.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Selenium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Silver	18.5	ug/L	20	ug/L	92.6	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Sodium	98000	ug/L	100000	ug/L	98	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Thallium	18.9	ug/L	20	ug/L	94.6	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Thorium	21.1	ug/L	20	ug/L	105	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Vanadium	19.5	ug/L	20	ug/L	97.4	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Zinc	21.8	ug/L	20	ug/L	109	80.0 − 120.0	08−MAY−21 22:39	210508−2

METALS
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Interference Check Sample

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Copper	0.239	ug/L					09−MAY−21 13:09	210509−3
	Iron	80000	ug/L	100000	ug/L	80	80.0 − 120.0	09−MAY−21 13:09	210509−3
ICSAB01									
	Copper	17.7	ug/L	20	ug/L	88.6	80.0 − 120.0	09−MAY−21 13:11	210509−3
	Iron	80900	ug/L	100000	ug/L	81	80.0 − 120.0	09−MAY−21 13:11	210509−3

METALS
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Interference Check Sample

SDG No: 541036

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Iron	82400	ug/L	100000	ug/L	82.4	80.0 − 120.0	10−MAY−21 01:37	210509−7
	Manganese	6.24	ug/L					10−MAY−21 01:37	210509−7
	Sodium	98600	ug/L	100000	ug/L	98.6	80.0 − 120.0	10−MAY−21 01:37	210509−7
ICSAB01									
	Iron	82800	ug/L	100000	ug/L	82.8	80.0 − 120.0	10−MAY−21 01:41	210509−7
	Manganese	25.0	ug/L	25.72	ug/L	97.2	80.0 − 120.0	10−MAY−21 01:41	210509−7
	Sodium	99300	ug/L	100000	ug/L	99.3	80.0 − 120.0	10−MAY−21 01:41	210509−7

METALS
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Matrix Spike Summary

SDG NO. 541036 **Client ID** MW-S40-04092021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034005 **Spike ID:** 1204799652

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75-125	1940		19.3	U	2000	96.5		MS
Antimony	ug/L	75-125	51.5		1.00	U	50.0	103		MS
Arsenic	ug/L	75-125	47.8		2.00	U	50.0	94.2		MS
Barium	ug/L	75-125	71.6		20.5		50.0	102		MS
Beryllium	ug/L	75-125	52.4		0.200	U	50.0	105		MS
Cadmium	ug/L	75-125	50.0		0.300	U	50.0	99.9		MS
Calcium	ug/L		20100		18900		2000	60.7	N/A	MS
Chromium	ug/L	75-125	46.7		3.00	U	50.0	93.2		MS
Cobalt	ug/L	75-125	47.8		0.584	J	50.0	94.4		MS
Copper	ug/L	75-125	49.8		0.300	U	50.0	99.2		MS
Iron	ug/L	75-125	2880		914		2000	98.1		MS
Lead	ug/L	75-125	50.3		0.500	U	50.0	101		MS
Magnesium	ug/L	75-125	6030		4240		2000	89.1		MS
Manganese	ug/L		8810		8700		50.0	222	N/A	MS
Molybdenum	ug/L	75-125	52.6		0.679	J	50.0	104		MS
Nickel	ug/L	75-125	51.3		4.53		50.0	93.6		MS
Potassium	ug/L	75-125	6230		4510		2000	86.4		MS
Selenium	ug/L	75-125	48.3		2.00	U	50.0	96.4		MS
Silver	ug/L	75-125	50.7		0.300	U	50.0	101		MS
Sodium	ug/L		24300		23300		2000	49.5	N/A	MS
Thallium	ug/L	75-125	50.1		0.600	U	50.0	100		MS
Thorium	ug/L	75-125	50.8		0.700	U	50.0	101		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 541036 **Client ID** MW−S40−04092021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034005 **Spike ID:** 1204799652

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.362		0.0100	U	0.360	101		MS
Uranium−238	ug/L	75−125	50.7		0.0670	U	49.6	102		MS
Vanadium	ug/L	75−125	48.1		3.30	U	50.0	94.1		MS
Zinc	ug/L	75−125	49.4		3.30	U	50.0	94.5		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 541036 **Client ID** MW−S40−04092021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034005 **Spike ID:** 1204799653

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Arsenic	ug/L	75−125	48.8		2.00	U	50.0	96.4		MS
Barium	ug/L	75−125	72.5		20.5		50.0	104		MS
Beryllium	ug/L	75−125	52.6		0.200	U	50.0	105		MS
Cadmium	ug/L	75−125	50.3		0.300	U	50.0	100		MS
Calcium	ug/L		20600		18900		2000	83.7	N/A	MS
Chromium	ug/L	75−125	47.8		3.00	U	50.0	95.2		MS
Cobalt	ug/L	75−125	48.5		0.584	J	50.0	95.8		MS
Copper	ug/L	75−125	52.9		0.300	U	50.0	105		MS
Iron	ug/L	75−125	2950		914		2000	102		MS
Lead	ug/L	75−125	50.9		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	6140		4240		2000	94.8		MS
Manganese	ug/L		9040		8700		50.0	690	N/A	MS
Molybdenum	ug/L	75−125	52.9		0.679	J	50.0	105		MS
Nickel	ug/L	75−125	52.4		4.53		50.0	95.7		MS
Potassium	ug/L	75−125	6410		4510		2000	95		MS
Selenium	ug/L	75−125	49.0		2.00	U	50.0	97.8		MS
Silver	ug/L	75−125	51.3		0.300	U	50.0	103		MS
Sodium	ug/L		25000		23300		2000	84.4	N/A	MS
Thallium	ug/L	75−125	50.5		0.600	U	50.0	101		MS
Thorium	ug/L	75−125	51.7		0.700	U	50.0	103		MS
Uranium−235	ug/L	75−125	0.368		0.0100	U	0.360	102		MS
Uranium−238	ug/L	75−125	51.9		0.0670	U	49.6	104		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 541036 **Client ID** MW−S40−04092021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541034005 **Spike ID:** 1204799653

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Vanadium	ug/L	75−125	49.2		3.30	U	50.0	96.3		MS
Zinc	ug/L	75−125	51.6		3.30	U	50.0	98.8		MS
Aluminum	ug/L	75−125	1950		19.3	U	2000	97.5		MS
Antimony	ug/L	75−125	51.8		1.00	U	50.0	103		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 541036 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S40−04092021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799652 **Duplicate ID:** 1204799653 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1940		1950		.973		MS
Antimony	ug/L	+/−20	51.5		51.8		.498		MS
Arsenic	ug/L	+/−20	47.8		48.8		2.22		MS
Barium	ug/L	+/−20	71.6		72.5		1.32		MS
Beryllium	ug/L	+/−20	52.4		52.6		.4		MS
Cadmium	ug/L	+/−20	50.0		50.3		.589		MS
Calcium	ug/L	+/−20	20100		20600		2.26		MS
Chromium	ug/L	+/−20	46.7		47.8		2.18		MS
Cobalt	ug/L	+/−20	47.8		48.5		1.52		MS
Copper	ug/L	+/−20	49.8		52.9		5.99		MS
Iron	ug/L	+/−20	2880		2950		2.56		MS
Lead	ug/L	+/−20	50.3		50.9		1.17		MS
Magnesium	ug/L	+/−20	6030		6140		1.88		MS
Manganese	ug/L	+/−20	8810		9040		2.62		MS
Molybdenum	ug/L	+/−20	52.6		52.9		.736		MS
Nickel	ug/L	+/−20	51.3		52.4		2.09		MS
Potassium	ug/L	+/−20	6230		6410		2.72		MS
Selenium	ug/L	+/−20	48.3		49.0		1.52		MS
Silver	ug/L	+/−20	50.7		51.3		1.13		MS
Sodium	ug/L	+/−20	24300		25000		2.84		MS
Thallium	ug/L	+/−20	50.1		50.5		.928		MS
Thorium	ug/L	+/−20	50.8		51.7		1.63		MS
Uranium−235	ug/L	+/−20	0.362		0.368		1.67		MS
Uranium−238	ug/L	+/−20	50.7		51.9		2.32		MS
Vanadium	ug/L	+/−20	48.1		49.2		2.33		MS
Zinc	ug/L	+/−20	49.4		51.6		4.32		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 541036 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S40−04092021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799652 **Duplicate ID:** 1204799653 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
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Laboratory Control Sample Summary

SDG NO. 541036

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799651								
	Aluminum	ug/L	2000	2020		101	80−120	MS
	Antimony	ug/L	50.0	49.4		98.7	80−120	MS
	Arsenic	ug/L	50.0	45.6		91.2	80−120	MS
	Barium	ug/L	50.0	49.0		98.1	80−120	MS
	Beryllium	ug/L	50.0	51.7		103	80−120	MS
	Cadmium	ug/L	50.0	48.9		97.8	80−120	MS
	Calcium	ug/L	2000	2000		99.8	80−120	MS
	Chromium	ug/L	50.0	47.2		94.4	80−120	MS
	Cobalt	ug/L	50.0	47.5		95	80−120	MS
	Copper	ug/L	50.0	50.2		100	80−120	MS
	Iron	ug/L	2000	1980		99.2	80−120	MS
	Lead	ug/L	50.0	49.7		99.4	80−120	MS
	Magnesium	ug/L	2000	1950		97.6	80−120	MS
	Manganese	ug/L	50.0	49.1		98.2	80−120	MS
	Molybdenum	ug/L	50.0	49.1		98.3	80−120	MS
	Nickel	ug/L	50.0	47.5		95	80−120	MS
	Potassium	ug/L	2000	1960		97.9	80−120	MS
	Selenium	ug/L	50.0	48.5		97.1	80−120	MS
	Silver	ug/L	50.0	50.3		101	80−120	MS
	Sodium	ug/L	2000	2040		102	80−120	MS
	Thallium	ug/L	50.0	49.6		99.1	80−120	MS
	Thorium	ug/L	50.0	48.7		97.4	80−120	MS
	Uranium−235	ug/L	0.360	0.360		99.9	80−120	MS
	Uranium−238	ug/L	49.6	50.0		101	80−120	MS
	Vanadium	ug/L	50.0	47.7		95.4	80−120	MS
	Zinc	ug/L	50.0	48.7		97.5	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 541036 **Client ID** MW−S40−04092021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541034005 **Serial Dilution ID:** 1204799654

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	20.5		20.3		.631			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	18900		18300		3.13		20	MS
Chromium	3	U	15	U				MS
Cobalt	.584	J	1.5	U	5.308			MS
Copper	.3	U	1.5	U				MS
Iron	914		902		1.332			MS
Lead	.5	U	2.5	U				MS
Magnesium	4240		4020		5.177		20	MS
Manganese	870		837		3.763		20	MS
Molybdenum	.679	J	1.02	J	49.485			MS
Nickel	4.53		4.56	J	.596			MS
Potassium	4510		4210		6.637			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	23300		22700		2.585		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.067	U	.335	U				MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	19.3	J				MS

SW846

METALS
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Serial Dilution Sample Summary

SDG NO. 541036 **Client ID:** MW−S40−04092021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541034005 **Serial Dilution ID:** 1204799654

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 541036 **Method Type**: MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2117213							
1204799650	MB for batch 2117213	MB	G	20−APR−21	50mL	50mL	
1204799651	LCS for batch 2117213	LCS	G	20−APR−21	50mL	50mL	
1204799652	MW−S40−04092021S	MS	G	20−APR−21	50mL	50mL	
1204799653	MW−S40−04092021SD	MSD	G	20−APR−21	50mL	50mL	
541036001	MW−S23−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541036002	MW−S23−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541036003	HA20−CMT−3S−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541036004	HA20−CMT−3S−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541036005	MW−SD35−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541036006	MW−SD35−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541036007	MW−BS35−04092021	SAMPLE	G	20−APR−21	50mL	50mL	
541036008	MW−BS35−04092021	SAMPLE	G	20−APR−21	50mL	50mL	

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541036

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:25:16																							X	X		
S10	1	19:27:03																							X	X		
S100	1	19:28:50																							X	X		
ICV01	1	19:30:36																							X	X		
ICB01	1	19:32:24																							X	X		
CRDL01	1	19:34:12																							X	X		
ICSA01	1	19:36:00																							X	X		
ICSAB01	1	19:37:48																							X	X		
CCV01	1	19:39:36																							X	X		
CCB01	1	19:41:23																							X	X		
ZZZZZZ	1	19:43:11																										
ZZZZZZ	1	19:44:58																										
ZZZZZZ	1	19:46:44																										
ZZZZZZ	1	19:48:31																										
ZZZZZZ	1	19:50:18																										
ZZZZZZ	1	19:52:05																										
CCV	1	19:53:52																							X	X		
CCB	1	19:55:40																							X	X		
ZZZZZZ	1	19:57:28																										
ZZZZZZ	1	19:59:14																										
ZZZZZZ	1	20:01:01																										
ZZZZZZ	1	20:02:48																										
ZZZZZZ	5	20:04:35																										
ZZZZZZ	1	20:06:22																										
ZZZZZZ	1	20:08:08																										
ZZZZZZ	1	20:09:55																										
ZZZZZZ	1	20:11:42																										
ZZZZZZ	1	20:13:28																										
CCV02	1	20:15:16																							X	X		
CCB02	1	20:17:04																							X	X		
1204799650	1	20:18:51																							X	X		
1204799651	1	20:20:37																							X	X		
ZZZZZZ	1	20:22:24																										
1204799652	1	20:24:11																							X	X		
1204799653	1	20:25:57																							X	X		
ZZZZZZ	1	20:27:44																										
1204799654	5	20:29:31																							X	X		
CCV03	1	20:31:18																							X	X		
CCB03	1	20:33:05																							X	X		
ZZZZZZ	1	20:34:53																										
ZZZZZZ	1	20:36:40																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541036

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	20:38:26																										
ZZZZZZ	1	20:40:13																										
ZZZZZZ	1	20:42:00																										
ZZZZZZ	1	20:43:47																										
ZZZZZZ	1	20:45:33																										
ZZZZZZ	1	20:47:20																										
CCV04	1	20:49:07																							X	X		
CCB04	1	20:50:55																							X	X		
ZZZZZZ	1	20:52:42																										
541036001	1	20:54:29																							X	X		
541036002	1	20:56:16																							X	X		
541036003	1	20:58:02																							X	X		
541036004	1	20:59:49																							X	X		
541036005	1	21:01:35																							X	X		
541036006	1	21:03:22																							X	X		
541036007	1	21:05:09																							X	X		
541036008	1	21:06:55																							X	X		
CCV05	1	21:08:42																							X	X		
CCB05	1	21:10:30																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541036

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	22:14:41	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	22:18:18	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	22:21:54	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	22:25:31	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	22:29:07	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	22:32:43	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	22:36:19	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	22:39:55	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	22:43:32	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	22:47:08	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	22:50:45	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	22:54:21	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	22:57:58	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	23:01:35																										
ZZZZZZ	1	23:05:11																										
ZZZZZZ	1	23:08:48																										
ZZZZZZ	1	23:12:25																										
ZZZZZZ	1	23:16:00																										
ZZZZZZ	1	23:19:37																										
CCV	1	23:23:15	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	23:26:52	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	23:30:29																										
ZZZZZZ	1	23:34:05																										
ZZZZZZ	1	23:37:42																										
ZZZZZZ	1	23:41:17																										
ZZZZZZ	5	23:44:53																										
ZZZZZZ	1	23:48:29																										
ZZZZZZ	1	23:52:06																										
ZZZZZZ	1	23:55:43																										
ZZZZZZ	1	23:59:20																										
ZZZZZZ	1	00:02:55																										
CCV03	1	00:06:32	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	00:10:09	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
1204799650	1	00:13:46	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
1204799651	1	00:17:23	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:21:00																										
1204799652	1	00:24:35	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
1204799653	1	00:28:11	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:31:47																										
1204799654	5	00:35:23	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
CCV04	1	00:39:01	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541036

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB04	1	00:42:38	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:46:15																										
ZZZZZZ	1	00:49:52																										
ZZZZZZ	1	00:53:28																										
ZZZZZZ	1	00:57:05																										
ZZZZZZ	1	01:00:41																										
ZZZZZZ	1	01:04:17																										
ZZZZZZ	1	01:07:53																										
ZZZZZZ	1	01:11:28																										
ZZZZZZ	1	01:15:05																										
CCV05	1	01:18:44	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	01:22:21	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541036001	1	01:25:59	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X	X			X	X
541036002	1	01:29:35	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X	X			X	X
541036003	1	01:33:10	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X	X			X	X
541036004	1	01:36:47	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X	X			X	X
541036005	1	01:40:23	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541036006	1	01:44:00	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541036007	1	01:47:36	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541036008	1	01:51:12	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCV06	1	01:54:50	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB06	1	01:58:27	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541036

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 09-MAY-21

End Date: 10-MAY-21

Data File: 210509-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	12:57:04										X	X															
S10	1	12:59:04										X	X															
S100	1	13:01:04										X	X															
ICV01	1	13:03:03										X	X															
ICB01	1	13:05:03										X	X															
CRDL01	1	13:07:03										X	X															
ICSA01	1	13:09:02										X	X															
ICSAB01	1	13:11:02										X	X															
CCV01	1	13:13:01										X	X															
CCB01	1	13:15:01										X	X															
LR01	1	13:17:00										X	X															
CCV02	1	13:19:00										X	X															
CCB02	1	13:20:59										X	X															
1204799650	1	13:22:59										X	X															
1204799651	1	13:24:59										X	X															
ZZZZZZ	1	13:26:59																										
1204799652	1	13:28:59										X	X															
1204799653	1	13:33:14										X	X															
ZZZZZZ	1	13:35:13																										
1204799654	5	13:37:13										X	X															
CCV03	1	13:39:13										X	X															
CCB03	1	13:41:13										X	X															
ZZZZZZ	1	13:43:13																										
ZZZZZZ	1	13:45:13																										
ZZZZZZ	1	13:47:12																										
ZZZZZZ	1	13:49:12																										
ZZZZZZ	1	13:51:11																										
ZZZZZZ	1	13:53:10																										
ZZZZZZ	1	13:55:09																										
ZZZZZZ	1	13:57:08																										
ZZZZZZ	1	13:59:07																										
CCV04	1	14:01:08										X	X															
CCB04	1	14:03:07										X	X															
541036001	1	14:05:08										X	X															
541036002	1	14:07:08										X	X															
541036003	1	14:09:07										X	X															
541036004	1	14:11:07										X	X															
541036005	1	14:13:06										X																
ZZZZZZ	10	14:15:07																										
541036006	1	14:17:07										X																
ZZZZZZ	10	14:19:07																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541036

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541036007	1	14:21:07										X	X															
541036008	1	14:23:07										X	X															
CCV05	1	14:25:08										X	X															
CCB05	1	14:27:08										X	X															

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541036

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	01:15:59											X			X						X						
S10	1	01:19:37											X			X						X						
S100	1	01:23:13											X			X						X						
ICV01	1	01:26:50											X			X						X						
ICB01	1	01:30:26											X			X						X						
CRDL01	1	01:34:03											X			X						X						
ICSA01	1	01:37:40											X			X						X						
ICSAB01	1	01:41:16											X			X						X						
CCV01	1	01:44:53											X			X						X						
CCB01	1	01:48:30											X			X						X						
LR01	1	01:52:07											X			X						X						
CCV02	1	01:55:44											X			X						X						
CCB02	1	01:59:21											X			X						X						
ZZZZZZ	1	02:02:57																										
ZZZZZZ	1	02:06:33																										
ZZZZZZ	1	02:10:09																										
ZZZZZZ	1	02:13:45																										
ZZZZZZ	1	02:17:21																										
ZZZZZZ	1	02:20:56																										
ZZZZZZ	5	02:24:32																										
ZZZZZZ	1	02:28:08																										
ZZZZZZ	1	02:31:44																										
CCV	1	02:35:20											X			X						X						
CCB	1	02:38:56											X			X						X						
ZZZZZZ	1	02:42:32																										
ZZZZZZ	1	02:46:08																										
ZZZZZZ	1	02:49:44																										
ZZZZZZ	1	02:53:20																										
ZZZZZZ	1	02:56:56																										
ZZZZZZ	1	03:00:32																										
ZZZZZZ	1	03:04:07																										
ZZZZZZ	1	03:07:43																										
CCV	1	03:11:19											X			X						X						
CCB	1	03:14:56											X			X						X						
ZZZZZZ	1	03:18:32																										
ZZZZZZ	1	03:22:08																										
ZZZZZZ	1	03:25:43																										
ZZZZZZ	1	03:29:19																										
ZZZZZZ	1	03:32:55																										
ZZZZZZ	1	03:36:31																										
ZZZZZZ	1	03:40:07																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541036

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	03:43:43																										
ZZZZZZ	1	03:47:18																										
CCV	1	03:50:55											X			X						X						
CCB	1	03:54:32											X			X						X						
ZZZZZZ	1	03:58:09																										
ZZZZZZ	1	04:01:45																										
ZZZZZZ	10	04:05:21																										
ZZZZZZ	10	04:08:56																										
ZZZZZZ	10	04:12:32																										
ZZZZZZ	10	04:16:08																										
ZZZZZZ	10	04:19:44																										
ZZZZZZ	50	04:23:20																										
ZZZZZZ	10	04:26:56																										
ZZZZZZ	10	04:30:32																										
CCV03	1	04:34:09											X			X						X						
CCB03	1	04:37:45											X			X						X						
1204799650	1	04:41:22														X												
1204799651	1	04:44:58														X												
ZZZZZZ	10	04:48:34																										
1204799652	10	04:52:10														X												
1204799653	10	04:55:46														X												
1204799654	50	04:59:22														X												
CCV04	1	05:02:58											X			X						X						
CCB04	1	05:06:35											X			X						X						
541036001	10	05:10:11																				X						
541036002	10	05:13:48																				X						
541036003	10	05:17:24																				X						
541036004	10	05:21:00																				X						
541036005	10	05:24:35											X															
541036006	10	05:28:11											X															
CCV05	1	05:31:47											X			X						X						
CCB05	1	05:35:24											X			X						X						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
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Instrument Detection Limits

SDG NO. 541036

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 541036

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117213**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799651	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799651	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799652	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799652	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799653	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799653	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204799650 MB	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799651 LCS	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034005	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799654 SDILT (541034005)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799652 MS (541034005)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799653 MSD (541034005)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034012	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034013	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034014	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034015	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034016	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034017	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034018	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034019	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541034020	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036001	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036002	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036003	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036004	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036005	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036006	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036007	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541036008	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3267483	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 94 C
Temperature within limits (Y/N)?: y
Thermometer ID: 118631
Hot Block ID: 2
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 12, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541037

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 16, 2021 and April 17, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04122021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541037

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541037

May 12, 2021

<u>Laboratory Identification:</u>

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

<u>Summary</u>

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 16, 2021 and April 17, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541037001	ML-3-1-04122021
541037002	ML-3-1-04122021
541037003	MW-S35-04122021
541037004	MW-S35-04122021
541037005	MW-SD37-04122021
541037006	MW-SD37-04122021
541037007	HA20-CMT-3I-04122021
541037008	HA20-CMT-3I-04122021
541037009	MW-BS25-04122021
541037010	MW-BS25-04122021
541037011	MW-SD42A-04122021
541037012	MW-SD42A-04122021
541037013	BEW-2-04122021
541037014	BEW-2-04122021
541037015	HA20-CMT-4S-04122021
541037016	HA20-CMT-4S-04122021
541037017	MW-S09-04122021
541037018	MW-S09-04122021
541037019	MW-SD44-04122021
541037020	MW-SD44-04122021

<u>Case Narrative</u>

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page: 1 of 3
Project # 3252H
GEL Quote #: GELP18-1125

COC Number [1]: 04122021
PO Number:

GEL Laboratories LLC
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541037

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) NI	Dissolved Metals (6020A ICP-MS) NI	U-235/U-238 plus Total U Calc. NI	Comments: Note: extra sample is required for sample specific QC
ML-3-1-04122021	4/12/2021	9:20	N	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
MW-S35-04122021	4/12/2021	9:40	N	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
MW-SD37-04122021	4/12/2021	9:55	N	Y	GW	U238		2	X	X	X	
HA20-CMT-3I-04122021	4/12/2021	10:00	N	Y	GW	U238		2	X	X	X	
MW-BS25-04122021	4/12/2021	10:10	N	Y	GW	U238		2	X	X	X	
MW-SD42A-04122021	4/12/2021	10:15	N	Y	GW	U238		2	X	X	X	
BEW-2-04122021	4/12/2021	10:30	N	Y	GW	U238		2	X	X	X	
HA20-CMT-4S-04122021	4/12/2021	11:00	N	Y	GW	U238		2	X	X	X	U-235/U-238 plus Total U Calc. for Total and Dissolved
MW-S09-04122021	4/12/2021	11:25	N	Y	GW	U238		2	X	X	X	
MW-SD44-04122021	4/12/2021	12:45	N	Y	GW	U238		2	X	X	X	

<-- Preservative Type (6)

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/13/21	11:00	1	[signature]	4/13/21	1100
2	[signature]	4/15/21	1500	2	[signature]	41621	925
3				3			

TAT Requested: Normal: X Rush: ____ Specify: ______
Fax Results: [ ] Yes [X] No
Select Deliverable: [X] C of A [X] QC Summary [X] Level 5
Additional Remarks:
For Lab Receiving Use Only: Custody Seal Intact? [ ] *Yes* [ ] *No* **Cooler Temp:** ____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)
Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).
6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic Hg= Mercury
Ba = Barium Se= Selenium
Cd = Cadmium Ag= Silver
Cr = Chromium MR= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via NAT nm

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541037
Received By: STACY BOONE	Date Received: APRIL 16, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 5252 3063 4°c 7734 5252 3637 3°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		/	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		/	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		/	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		/	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		/	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	/			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	/			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: see above
4	Daily check performed and passed on IR temperature gun?	/			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	/			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			/	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	/			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	/			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	/			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC? 4/19/21	/		/	Circle Applicable: No container count on COC Other (describe) See Below
12	Are sample containers identifiable as GEL provided by use of GEL labels?	/			
13	COC form is properly signed in relinquished/received sections?	/			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

-Missing Cooler 7734 5252 4070

7734 5252 3512 4°c 7734 5252 3420 3°c

PM (or PMA) review: Initials DS Date 4/19/21 Page 1 of 1

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541037
Received By: Stacy Boone	Date Received: April 17, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 5252 4070

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 3°c
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

* Rec'd Missing samples from 4/14

PM (or PMA) review: Initials MB Date 4/20/21 Page 1 of 1

GL-CHL-SR-001 Rev 7

Work Order Containers

Sample ID: **541037001**
Client Sample ID: **ML−3−1−04122021**
Description: **Ground Water**

Label: 541037001.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037001.01.01	**Type: New Undefined**	
08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037002**
Client Sample ID: **ML−3−1−04122021**
Description: **Dissolved Ground Water**

Label: 541037002.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037002.01.01	**Type: New Undefined**	
08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037003**
Client Sample ID: **MW−S35−04122021**
Description: **Ground Water**

Label: 541037003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to

Work Order Containers

Sample ID: **541037003**
Client Sample ID: **MW−S35−04122021**
Description: **Ground Water**

Label: 541037003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037003.01.01	**Type: New Undefined**	
08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037004**
Client Sample ID: **MW−S35−04122021**
Description: **Dissolved Ground Water**

Label: 541037004.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037004.01.01	**Type: New Undefined**	
08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037005**
Client Sample ID: **MW−SD37−04122021**
Description: **Ground Water**

Label: 541037005.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541037005**
Client Sample ID: **MW−SD37−04122021**
Description: **Ground Water**

Label: 541037005.01.01	**Type: New Undefined**	
08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037006**
Client Sample ID: **MW−SD37−04122021**
Description: **Dissolved Ground Water**

Label: 541037006.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037006.01.01	**Type: New Undefined**	
08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037007**
Client Sample ID: **HA20−CMT−3I−04122021**
Description: **Ground Water**

Label: 541037007.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037007.01.01	**Type: New Undefined**	
08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541037008**
Client Sample ID: **HA20−CMT−3I−04122021**
Description: **Dissolved Ground Water**

Label: 541037008.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037008.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037009**
Client Sample ID: **MW−BS25−04122021**
Description: **Ground Water**

Label: 541037009.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037009.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037010**
Client Sample ID: **MW−BS25−04122021**
Description: **Dissolved Ground Water**

Label: 541037010.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to

Work Order Containers

Sample ID: **541037010**
Client Sample ID: **MW−BS25−04122021**
Description: **Dissolved Ground Water**

Label: 541037010.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037010.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037011**
Client Sample ID: **MW−SD42A−04122021**
Description: **Ground Water**

Label: 541037011.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037011.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037012**
Client Sample ID: **MW−SD42A−04122021**
Description: **Dissolved Ground Water**

Label: 541037012.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541037012**
Client Sample ID: **MW−SD42A−04122021**
Description: **Dissolved Ground Water**

Label: 541037012.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037013**
Client Sample ID: **BEW−2−04122021**
Description: **Ground Water**

Label: 541037013.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037013.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037014**
Client Sample ID: **BEW−2−04122021**
Description: **Dissolved Ground Water**

Label: 541037014.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037014.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541037015**
Client Sample ID: **HA20−CMT−4S−04122021**
Description: **Ground Water**

Label: 541037015.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037015.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037016**
Client Sample ID: **HA20−CMT−4S−04122021**
Description: **Dissolved Ground Water**

Label: 541037016.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037016.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037017**
Client Sample ID: **MW−S09−04122021**
Description: **Ground Water**

Label: 541037017.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to

Work Order Containers

Sample ID: **541037017**
Client Sample ID: **MW−S09−04122021**
Description: **Ground Water**

Label: 541037017.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037017.01.01 | **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037018**
Client Sample ID: **MW−S09−04122021**
Description: **Dissolved Ground Water**

Label: 541037018.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037018.01.01 | **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037019**
Client Sample ID: **MW−SD44−04122021**
Description: **Ground Water**

Label: 541037019.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541037019**
Client Sample ID: **MW−SD44−04122021**
Description: **Ground Water**

Label: 541037019.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541037020**
Client Sample ID: **MW−SD44−04122021**
Description: **Dissolved Ground Water**

Label: 541037020.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:01:27	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:32:40	Hannah Hatherly	Transfered custody to batch 2117217
19−APR−21 19:32:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117217 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 07:01:57	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541037020.01.01 **Type: New Undefined**

08−MAY−21 17:15:55	Paul Boyd	Transfered custody to batch 2117218
08−MAY−21 17:15:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 12 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541037

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batch:</u> 2117218

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2126937

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batch:</u> 2117217

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541037001	ML-3-1-04122021
541037002	ML-3-1-04122021
541037003	MW-S35-04122021
541037004	MW-S35-04122021
541037005	MW-SD37-04122021
541037006	MW-SD37-04122021
541037007	HA20-CMT-3I-04122021
541037008	HA20-CMT-3I-04122021
541037009	MW-BS25-04122021
541037010	MW-BS25-04122021
541037011	MW-SD42A-04122021
541037012	MW-SD42A-04122021
541037013	BEW-2-04122021
541037014	BEW-2-04122021
541037015	HA20-CMT-4S-04122021
541037016	HA20-CMT-4S-04122021
541037017	MW-S09-04122021
541037018	MW-S09-04122021
541037019	MW-SD44-04122021
541037020	MW-SD44-04122021
1204799660	Method Blank (MB)**ICP-MS**
1204799661	Laboratory Control Sample (LCS)
1204799664	541037001(ML-3-1-04122021L) Serial Dilution (SD)
1204799662	541037001(ML-3-1-04122021S) Matrix Spike (MS)
1204799663	541037001(ML-3-1-04122021SD) Matrix Spike Duplicate (MSD)

Samples 541037001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541037003 (MW-S35-04122021), 541037004 (MW-S35-04122021), 541037005 (MW-SD37-04122021), 541037006 (MW-SD37-04122021), 541037007 (HA20-CMT-3I-04122021), 541037008 (HA20-CMT-3I-04122021), 541037011 (MW-SD42A-04122021), 541037012 (MW-SD42A-04122021), 541037013 (BEW-2-04122021), 541037014 (BEW-2-04122021), 541037015 (HA20-CMT-4S-04122021) and 541037016 (HA20-CMT-4S-04122021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541037									
	003	**004**	**005**	**006**	**007**	**008**	**011**	**012**	**013**	**014**
Calcium	10X	10X	10X	10X	1X	1X	1X	1X	10X	10X
Manganese	1X	1X	1X	1X	1X	1X	10X	10X	1X	1X
Sodium	10X	10X	10X	10X	10X	10X	1X	1X	1X	1X

Analyte	541037	
	015	**016**
Uranium-238	2X	2X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541037 GEL Work Order: 541037

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
** Indicates analyte is a surrogate compound.
J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Jamie Johnson**

Date: 12 MAY 2021 **Title: Group Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037001 **BASIS:** As Received **DATE COLLECTED** 12-APR-21

CLIENT ID: ML-3-1-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-39-3	Barium	5.96	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-70-2	Calcium	5580	ug/L		80.0	200	200	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-50-8	Copper	2.26	ug/L		0.300	2.00	2.00	1	MS	PRB	05/09/21 15:13	210509-7	2117218
7439-89-6	Iron	55.4	ug/L	J	33.0	100	100	1	MS	PRB	05/09/21 15:13	210509-7	2117218
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7439-95-4	Magnesium	1520	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7439-96-5	Manganese	69.2	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7439-98-7	Molybdenum	0.299	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-02-0	Nickel	0.765	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-09-7	Potassium	1850	ug/L		80.0	300	300	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-23-5	Sodium	9200	ug/L		80.0	250	250	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-61-1	Total Uranium	0.109	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:15	210508-1	2117218
7440-61-1	Uranium-238	0.109	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:15	210508-1	2117218
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:09	210508-2	2117218
7440-66-6	Zinc	27.6	ug/L		3.30	20.0	20.0	1	MS	PRB	05/09/21 02:09	210508-2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037002 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: ML−3−1−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−39−3	Barium	3.98	ug/L	J	0.670	4.00	4.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−70−2	Calcium	5560	ug/L		80.0	200	200	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−50−8	Copper	0.787	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:22	210509−7	2117218
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 15:22	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7439−95−4	Magnesium	1530	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7439−96−5	Manganese	4.22	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7439−98−7	Molybdenum	0.350	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−09−7	Potassium	1890	ug/L		80.0	300	300	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−23−5	Sodium	9270	ug/L		80.0	250	250	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:24	210508−1	2117218
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:24	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:27	210508−2	2117218
7440−66−6	Zinc	5.95	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:27	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037003 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−S35−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	73.3	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−39−3	Barium	136	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−70−2	Calcium	86500	ug/L		800	2000	2000	10	MS	PRB	05/09/21 22:23	210509−10	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−50−8	Copper	0.464	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:24	210509−7	2117218
7439−89−6	Iron	122	ug/L		33.0	100	100	1	MS	PRB	05/09/21 15:24	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7439−95−4	Magnesium	14400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7439−96−5	Manganese	4.41	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−02−0	Nickel	2.62	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−09−7	Potassium	5560	ug/L		80.0	300	300	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−23−5	Sodium	169000	ug/L		800	2500	2500	10	MS	PRB	05/09/21 22:23	210509−10	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−61−1	Total Uranium	0.0777	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:26	210508−1	2117218
7440−61−1	Uranium−238	0.0777	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:26	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:30	210508−2	2117218
7440−66−6	Zinc	3.68	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:30	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037004 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−S35−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−39−3	Barium	137	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−70−2	Calcium	88400	ug/L		800	2000	2000	10	MS	PRB	05/09/21 22:26	210509−10	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:26	210509−7	2117218
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 15:26	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7439−95−4	Magnesium	14500	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7439−96−5	Manganese	2.04	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−02−0	Nickel	2.46	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−09−7	Potassium	5660	ug/L		80.0	300	300	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−23−5	Sodium	172000	ug/L		800	2500	2500	10	MS	PRB	05/09/21 22:26	210509−10	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:28	210508−1	2117218
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:28	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:34	210508−2	2117218
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:34	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037005 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−SD37−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	39.6	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−39−3	Barium	108	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−70−2	Calcium	84400	ug/L		800	2000	2000	10	MS	PRB	05/09/21 22:30	210509−10	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−48−4	Cobalt	4.10	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−50−8	Copper	0.609	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:32	210509−7	2117218
7439−89−6	Iron	874	ug/L		33.0	100	100	1	MS	PRB	05/09/21 15:32	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7439−95−4	Magnesium	21600	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7439−96−5	Manganese	260	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−02−0	Nickel	14.8	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−09−7	Potassium	9270	ug/L		80.0	300	300	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−23−5	Sodium	76100	ug/L		800	2500	2500	10	MS	PRB	05/09/21 22:30	210509−10	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−61−1	Total Uranium	0.197	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:33	210508−1	2117218
7440−61−1	Uranium−238	0.197	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:33	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:45	210508−2	2117218
7440−66−6	Zinc	4.18	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:45	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037006 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−SD37−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−39−3	Barium	110	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−70−2	Calcium	85800	ug/L		800	2000	2000	10	MS	PRB	05/09/21 22:33	210509−10	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−48−4	Cobalt	3.91	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−50−8	Copper	0.490	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:34	210509−7	2117218
7439−89−6	Iron	743	ug/L		33.0	100	100	1	MS	PRB	05/09/21 15:34	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7439−95−4	Magnesium	22300	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7439−96−5	Manganese	258	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−02−0	Nickel	14.9	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−09−7	Potassium	9400	ug/L		80.0	300	300	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−23−5	Sodium	76400	ug/L		800	2500	2500	10	MS	PRB	05/09/21 22:33	210509−10	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−61−1	Total Uranium	0.143	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:35	210508−1	2117218
7440−61−1	Uranium−238	0.143	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:35	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:48	210508−2	2117218
7440−66−6	Zinc	4.40	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:48	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037007 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: HA20−CMT−3I−04122021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	230	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−38−2	Arsenic	7.34	ug/L		2.00	5.00	5.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−39−3	Barium	7.84	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−70−2	Calcium	18500	ug/L		80.0	200	200	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:36	210509−7	2117218
7439−89−6	Iron	74.2	ug/L	J	33.0	100	100	1	MS	PRB	05/09/21 15:36	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7439−95−4	Magnesium	2060	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7439−96−5	Manganese	139	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7439−98−7	Molybdenum	234	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−09−7	Potassium	4670	ug/L		80.0	300	300	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−23−5	Sodium	186000	ug/L		800	2500	2500	10	MS	PRB	05/09/21 22:44	210509−10	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−61−1	Total Uranium	2.55	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:37	210508−1	2117218
7440−61−1	Uranium−238	2.55	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:37	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:52	210508−2	2117218
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:52	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037008 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: HA20−CMT−3I−04122021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	200	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−38−2	Arsenic	7.16	ug/L		2.00	5.00	5.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−39−3	Barium	7.10	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−70−2	Calcium	17900	ug/L		80.0	200	200	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:38	210509−7	2117218
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 15:38	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7439−95−4	Magnesium	1960	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7439−96−5	Manganese	128	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7439−98−7	Molybdenum	227	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−02−0	Nickel	1.06	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−09−7	Potassium	4520	ug/L		80.0	300	300	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−23−5	Sodium	185000	ug/L		800	2500	2500	10	MS	PRB	05/09/21 22:48	210509−10	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−61−1	Total Uranium	2.58	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:39	210508−1	2117218
7440−61−1	Uranium−238	2.58	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:39	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:56	210508−2	2117218
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:56	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037009 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−BS25−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	29.3	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−39−3	Barium	13.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−70−2	Calcium	28700	ug/L		80.0	200	200	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−50−8	Copper	0.489	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:40	210509−7	2117218
7439−89−6	Iron	79.9	ug/L	J	33.0	100	100	1	MS	PRB	05/09/21 15:40	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7439−95−4	Magnesium	5500	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7439−96−5	Manganese	42.6	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7439−98−7	Molybdenum	5.47	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−09−7	Potassium	4370	ug/L		80.0	300	300	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−23−5	Sodium	8230	ug/L		80.0	250	250	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−61−1	Total Uranium	6.09	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0426	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:40	210508−1	2117218
7440−61−1	Uranium−238	6.05	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:40	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:59	210508−2	2117218
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 02:59	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037010 **BASIS:** Filtered **DATE COLLECTED** 12-APR-21

CLIENT ID: MW-BS25-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-39-3	Barium	11.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-70-2	Calcium	29000	ug/L		80.0	200	200	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:42	210509-7	2117218
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 15:42	210509-7	2117218
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7439-95-4	Magnesium	5690	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7439-96-5	Manganese	37.3	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7439-98-7	Molybdenum	5.44	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-09-7	Potassium	4390	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-23-5	Sodium	8010	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-61-1	Total Uranium	6.42	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0464	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:42	210508-1	2117218
7440-61-1	Uranium-238	6.37	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:42	210508-1	2117218
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:03	210508-2	2117218
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:03	210508-2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037011 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−SD42A−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	28.8	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−39−3	Barium	34.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−70−2	Calcium	46300	ug/L		80.0	200	200	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−48−4	Cobalt	4.49	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−50−8	Copper	0.523	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:44	210509−7	2117218
7439−89−6	Iron	1280	ug/L		33.0	100	100	1	MS	PRB	05/09/21 15:44	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7439−95−4	Magnesium	10300	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7439−96−5	Manganese	2580	ug/L		10.0	50.0	50.0	10	MS	PRB	05/09/21 22:51	210509−10	2117218
7439−98−7	Molybdenum	0.290	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−02−0	Nickel	12.3	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−09−7	Potassium	5850	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−23−5	Sodium	28300	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−61−1	Total Uranium	0.288	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:44	210508−1	2117218
7440−61−1	Uranium−238	0.288	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:44	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:06	210508−2	2117218
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:06	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037012 **BASIS:** Filtered **DATE COLLECTED** 12-APR-21

CLIENT ID: MW-SD42A-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-39-3	Barium	33.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-70-2	Calcium	44200	ug/L		80.0	200	200	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-48-4	Cobalt	4.23	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-50-8	Copper	0.462	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:46	210509-7	2117218
7439-89-6	Iron	935	ug/L		33.0	100	100	1	MS	PRB	05/09/21 15:46	210509-7	2117218
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7439-95-4	Magnesium	9650	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7439-96-5	Manganese	2470	ug/L		10.0	50.0	50.0	10	MS	PRB	05/09/21 22:55	210509-10	2117218
7439-98-7	Molybdenum	0.321	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-02-0	Nickel	11.6	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-09-7	Potassium	5600	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-23-5	Sodium	27200	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-61-1	Total Uranium	0.240	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:46	210508-1	2117218
7440-61-1	Uranium-238	0.240	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:46	210508-1	2117218
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:10	210508-2	2117218
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:10	210508-2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037013 **BASIS:** As Received **DATE COLLECTED** 12-APR-21

CLIENT ID: BEW-2-04122021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	21.6	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-36-0	Antimony	15.0	ug/L		1.00	3.00	3.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-38-2	Arsenic	5.07	ug/L		2.00	5.00	5.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-39-3	Barium	32.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-70-2	Calcium	52600	ug/L		800	2000	2000	10	MS	PRB	05/09/21 22:59	210509-10	2117218
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-48-4	Cobalt	1.75	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-50-8	Copper	3.98	ug/L		0.300	2.00	2.00	1	MS	PRB	05/09/21 15:52	210509-7	2117218
7439-89-6	Iron	7890	ug/L		33.0	100	100	1	MS	PRB	05/09/21 15:52	210509-7	2117218
7439-92-1	Lead	6.27	ug/L		0.500	2.00	2.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7439-95-4	Magnesium	16800	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7439-96-5	Manganese	365	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7439-98-7	Molybdenum	16.6	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-02-0	Nickel	3.89	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-09-7	Potassium	3970	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-23-5	Sodium	32200	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-61-1	Total Uranium	83.4	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.614	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 12:01	210509-3	2117218
7440-61-1	Uranium-238	82.8	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/09/21 12:01	210509-3	2117218
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:21	210508-2	2117218
7440-66-6	Zinc	40.2	ug/L		3.30	20.0	20.0	1	MS	PRB	05/09/21 03:21	210508-2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037014 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: BEW−2−04122021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−36−0	Antimony	8.35	ug/L		1.00	3.00	3.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−38−2	Arsenic	2.66	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−39−3	Barium	32.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−70−2	Calcium	54400	ug/L		800	2000	2000	10	MS	PRB	05/09/21 23:02	210509−10	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−48−4	Cobalt	1.65	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−50−8	Copper	0.488	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:54	210509−7	2117218
7439−89−6	Iron	4310	ug/L		33.0	100	100	1	MS	PRB	05/09/21 15:54	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7439−95−4	Magnesium	17500	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7439−96−5	Manganese	365	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7439−98−7	Molybdenum	26.3	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−02−0	Nickel	3.42	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−09−7	Potassium	4160	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−23−5	Sodium	33400	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−61−1	Total Uranium	87.1	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.611	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:53	210508−1	2117218
7440−61−1	Uranium−238	86.5	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:53	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:24	210508−2	2117218
7440−66−6	Zinc	4.75	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:24	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037015 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: HA20−CMT−4S−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−39−3	Barium	26.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−70−2	Calcium	20600	ug/L		80.0	200	200	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−50−8	Copper	1.35	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:56	210509−7	2117218
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 15:56	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7439−95−4	Magnesium	4890	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7439−96−5	Manganese	36.7	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7439−98−7	Molybdenum	5.86	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−02−0	Nickel	13.7	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−09−7	Potassium	3520	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−23−5	Sodium	28400	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−61−1	Total Uranium	160	ug/L		0.134	0.400	0.400			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.301	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:55	210508−1	2117218
7440−61−1	Uranium−238	160	ug/L		0.134	0.400	0.400	2	MS	PRB	05/09/21 12:03	210509−3	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:28	210508−2	2117218
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:28	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037016 **BASIS:** Filtered **DATE COLLECTED** 12-APR-21

CLIENT ID: HA20-CMT-4S-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-39-3	Barium	26.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-70-2	Calcium	20700	ug/L		80.0	200	200	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-50-8	Copper	1.56	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 15:58	210509-7	2117218
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 15:58	210509-7	2117218
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7439-95-4	Magnesium	4930	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7439-96-5	Manganese	37.2	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7439-98-7	Molybdenum	5.94	ug/L		0.200	1.00	1.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-02-0	Nickel	14.3	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-09-7	Potassium	3560	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-23-5	Sodium	28900	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-61-1	Total Uranium	133	ug/L		0.134	0.400	0.400			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.255	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:56	210508-1	2117218
7440-61-1	Uranium-238	133	ug/L		0.134	0.400	0.400	2	MS	PRB	05/09/21 12:05	210509-3	2117218
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:32	210508-2	2117218
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:32	210508-2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037017 **BASIS:** As Received **DATE COLLECTED** 12-APR-21

CLIENT ID: MW-S09-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	36.2	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-39-3	Barium	16.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-70-2	Calcium	14500	ug/L		80.0	200	200	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-48-4	Cobalt	0.363	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-50-8	Copper	0.407	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 16:00	210509-7	2117218
7439-89-6	Iron	71.2	ug/L	J	33.0	100	100	1	MS	PRB	05/09/21 16:00	210509-7	2117218
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7439-95-4	Magnesium	3430	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7439-96-5	Manganese	2.86	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-02-0	Nickel	0.872	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-09-7	Potassium	2870	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-23-5	Sodium	36100	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-61-1	Total Uranium	0.159	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 21:58	210508-1	2117218
7440-61-1	Uranium-238	0.159	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 21:58	210508-1	2117218
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:35	210508-2	2117218
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:35	210508-2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037018 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−S09−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−39−3	Barium	15.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−70−2	Calcium	14400	ug/L		80.0	200	200	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−50−8	Copper	0.516	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 16:02	210509−7	2117218
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/09/21 16:02	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7439−95−4	Magnesium	3420	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−02−0	Nickel	1.07	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−09−7	Potassium	2870	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−23−5	Sodium	35700	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−61−1	Total Uranium	0.0902	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 22:00	210508−1	2117218
7440−61−1	Uranium−238	0.0902	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 22:00	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:39	210508−2	2117218
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:39	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037019 **BASIS:** As Received **DATE COLLECTED** 12-APR-21

CLIENT ID: MW-SD44-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	103	ug/L		19.3	50.0	50.0	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-38-2	Arsenic	3.94	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-39-3	Barium	56.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-41-7	Beryllium	0.212	ug/L	J	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-70-2	Calcium	23300	ug/L		80.0	200	200	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-48-4	Cobalt	2.23	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-50-8	Copper	0.793	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 16:04	210509-7	2117218
7439-89-6	Iron	4330	ug/L		33.0	100	100	1	MS	PRB	05/09/21 16:04	210509-7	2117218
7439-92-1	Lead	0.620	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7439-95-4	Magnesium	8170	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7439-96-5	Manganese	272	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7439-98-7	Molybdenum	0.361	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-02-0	Nickel	2.89	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-09-7	Potassium	4520	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-23-5	Sodium	15800	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-61-1	Total Uranium	0.267	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 22:02	210508-1	2117218
7440-61-1	Uranium-238	0.267	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/08/21 22:02	210508-1	2117218
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:42	210508-2	2117218
7440-66-6	Zinc	5.30	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:42	210508-2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541037 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541037020 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−SD44−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	30.6	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−39−3	Barium	36.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−70−2	Calcium	22300	ug/L		80.0	200	200	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−48−4	Cobalt	2.00	ug/L		0.300	1.00	1.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−50−8	Copper	0.344	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/09/21 16:06	210509−7	2117218
7439−89−6	Iron	2690	ug/L		33.0	100	100	1	MS	PRB	05/09/21 16:06	210509−7	2117218
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7439−95−4	Magnesium	7850	ug/L		10.0	30.0	30.0	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7439−96−5	Manganese	262	ug/L		1.00	5.00	5.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7439−98−7	Molybdenum	0.395	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−02−0	Nickel	2.59	ug/L		0.600	2.00	2.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−09−7	Potassium	4350	ug/L		80.0	300	300	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−23−5	Sodium	15400	ug/L		80.0	250	250	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−61−1	Total Uranium	0.115	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/08/21 22:03	210508−1	2117218
7440−61−1	Uranium−238	0.115	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/08/21 22:03	210508−1	2117218
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:46	210508−2	2117218
7440−66−6	Zinc	3.85	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/09/21 03:46	210508−2	2117218

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117218	2117217	SW846 3005A	50	mL	50	mL	04/20/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
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Initial and Continuing Calibration Verification

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.4	90.0 − 110.0	MS	08−MAY−21 19:30	210508−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 19:30	210508−1
	Aluminum	5040	ug/L	5050	ug/L	99.8	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Antimony	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Arsenic	48.6	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Barium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Beryllium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Cadmium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Calcium	4970	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Chromium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Cobalt	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Magnesium	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Manganese	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Molybdenum	48.7	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Nickel	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Potassium	5080	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Selenium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Silver	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Sodium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Thallium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Thorium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Vanadium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Zinc	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	08−MAY−21 22:25	210508−2
	Uranium−235	0.36	ug/L	0.36	ug/L	99.7	90.0 − 110.0	MS	09−MAY−21 11:44	210509−3
	Uranium−238	49.1	ug/L	49.64	ug/L	98.8	90.0 − 110.0	MS	09−MAY−21 11:44	210509−3
	Copper	52	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	09−MAY−21 13:03	210509−7
	Iron	5010	ug/L	5000	ug/L	100.1	90.0 − 110.0	MS	09−MAY−21 13:03	210509−7
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 19:58	210509−10
	Manganese	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 19:58	210509−10
	Sodium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	09−MAY−21 19:58	210509−10

METALS
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Initial and Continuing Calibration Verification

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV01										
	Uranium−235	0.37	ug/L	0.36	ug/L	102	90.0 − 110.0	MS	08−MAY−21 19:39	210508−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 19:39	210508−1
	Aluminum	5000	ug/L	5050	ug/L	99	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Antimony	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Arsenic	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Barium	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Beryllium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Cadmium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Calcium	4870	ug/L	5000	ug/L	97.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Chromium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Cobalt	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Lead	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Magnesium	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Manganese	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Molybdenum	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Nickel	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Potassium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Selenium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Silver	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Sodium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Thallium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Thorium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Vanadium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Zinc	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	08−MAY−21 22:43	210508−2
	Uranium−235	0.38	ug/L	0.36	ug/L	106.8	90.0 − 110.0	MS	09−MAY−21 11:53	210509−3
	Uranium−238	51.5	ug/L	49.64	ug/L	103.8	90.0 − 110.0	MS	09−MAY−21 11:53	210509−3
	Copper	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 13:13	210509−7
	Iron	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	09−MAY−21 13:13	210509−7
	Calcium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	09−MAY−21 20:16	210509−10
	Manganese	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	09−MAY−21 20:16	210509−10
	Sodium	5170	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	09−MAY−21 20:16	210509−10

METALS
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Initial and Continuing Calibration Verification

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV02										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.8	90.0 − 110.0	MS	08−MAY−21 21:08	210508−1
	Uranium−238	50.9	ug/L	49.64	ug/L	102.6	90.0 − 110.0	MS	08−MAY−21 21:08	210508−1
	Aluminum	5080	ug/L	5050	ug/L	100.5	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Antimony	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Arsenic	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Barium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Beryllium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Cadmium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Calcium	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Chromium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Cobalt	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Lead	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Manganese	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Molybdenum	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Nickel	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Potassium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Selenium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Silver	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Sodium	5240	ug/L	5000	ug/L	104.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Thallium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Thorium	54.9	ug/L	50	ug/L	109.9	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Vanadium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Zinc	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	08−MAY−21 22:54	210508−2
	Uranium−235	0.38	ug/L	0.36	ug/L	105.4	90.0 − 110.0	MS	09−MAY−21 12:07	210509−3
	Uranium−238	50.9	ug/L	49.64	ug/L	102.6	90.0 − 110.0	MS	09−MAY−21 12:07	210509−3
	Copper	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	09−MAY−21 13:19	210509−7
	Iron	5090	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	09−MAY−21 13:19	210509−7
	Calcium	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	MS	09−MAY−21 20:27	210509−10
	Manganese	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	09−MAY−21 20:27	210509−10
	Sodium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	09−MAY−21 20:27	210509−10

METALS
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Initial and Continuing Calibration Verification

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV03										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.8	90.0 − 110.0	MS	08−MAY−21 21:30	210508−1
	Uranium−238	50.2	ug/L	49.64	ug/L	101.2	90.0 − 110.0	MS	08−MAY−21 21:30	210508−1
	Aluminum	4880	ug/L	5050	ug/L	96.6	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Antimony	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Arsenic	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Barium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Beryllium	48.2	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Cadmium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Calcium	4740	ug/L	5000	ug/L	94.8	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Chromium	47.7	ug/L	50	ug/L	95.5	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Cobalt	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Lead	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Magnesium	4850	ug/L	5000	ug/L	97	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Manganese	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Molybdenum	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Nickel	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Potassium	4780	ug/L	5000	ug/L	95.7	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Selenium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Silver	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Sodium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Thorium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Vanadium	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Zinc	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	09−MAY−21 01:54	210508−2
	Copper	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	09−MAY−21 15:05	210509−7
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	09−MAY−21 15:05	210509−7
	Calcium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	09−MAY−21 22:08	210509−10
	Manganese	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	09−MAY−21 22:08	210509−10
	Sodium	5050	ug/L	5000	ug/L	101	90.0 − 110.0	MS	09−MAY−21 22:08	210509−10
CCV04										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.6	90.0 − 110.0	MS	08−MAY−21 21:47	210508−1

METALS
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Initial and Continuing Calibration Verification

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Uranium−238	52.3	ug/L	49.64	ug/L	105.4	90.0 − 110.0	MS	08−MAY−21 21:47	210508−1
	Aluminum	4830	ug/L	5050	ug/L	95.6	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Antimony	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Arsenic	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Barium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Beryllium	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Cadmium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Calcium	4770	ug/L	5000	ug/L	95.3	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Chromium	47.7	ug/L	50	ug/L	95.4	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Cobalt	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Lead	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Magnesium	4810	ug/L	5000	ug/L	96.2	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Manganese	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Molybdenum	48.5	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Nickel	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Potassium	4750	ug/L	5000	ug/L	95	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Selenium	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Silver	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Sodium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Thallium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Thorium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Vanadium	47.4	ug/L	50	ug/L	94.7	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Zinc	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	09−MAY−21 02:38	210508−2
	Copper	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	09−MAY−21 15:28	210509−7
	Iron	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	MS	09−MAY−21 15:28	210509−7
	Calcium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	09−MAY−21 22:37	210509−10
	Manganese	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	09−MAY−21 22:37	210509−10
	Sodium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	09−MAY−21 22:37	210509−10
CCV05										
	Uranium−235	0.37	ug/L	0.36	ug/L	102	90.0 − 110.0	MS	08−MAY−21 22:05	210508−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.6	90.0 − 110.0	MS	08−MAY−21 22:05	210508−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Aluminum	4760	ug/L	5050	ug/L	94.3	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Antimony	51.8	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Arsenic	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Barium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Beryllium	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Cadmium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Calcium	4720	ug/L	5000	ug/L	94.4	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Chromium	46.9	ug/L	50	ug/L	93.8	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Cobalt	48	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Lead	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Magnesium	4720	ug/L	5000	ug/L	94.4	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Manganese	47.7	ug/L	50	ug/L	95.5	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Molybdenum	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Nickel	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Potassium	4710	ug/L	5000	ug/L	94.2	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Selenium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Silver	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Sodium	4920	ug/L	5000	ug/L	98.4	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Thallium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Thorium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Vanadium	47	ug/L	50	ug/L	94	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Zinc	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	09−MAY−21 03:14	210508−2
	Copper	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	09−MAY−21 15:48	210509−7
	Iron	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	09−MAY−21 15:48	210509−7
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	09−MAY−21 23:06	210509−10
	Manganese	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	09−MAY−21 23:06	210509−10
	Sodium	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	09−MAY−21 23:06	210509−10
CCV06										
	Aluminum	4760	ug/L	5050	ug/L	94.3	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Antimony	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Arsenic	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Beryllium	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Cadmium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Calcium	4670	ug/L	5000	ug/L	93.3	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Chromium	47.2	ug/L	50	ug/L	94.3	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Cobalt	47.7	ug/L	50	ug/L	95.5	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Lead	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Magnesium	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Manganese	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Molybdenum	48.6	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Nickel	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Potassium	4700	ug/L	5000	ug/L	94	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Selenium	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Silver	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Sodium	4950	ug/L	5000	ug/L	99.1	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Thallium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Thorium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Vanadium	47.4	ug/L	50	ug/L	94.7	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Zinc	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	09−MAY−21 03:50	210508−2
	Copper	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	09−MAY−21 16:08	210509−7
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	09−MAY−21 16:08	210509−7

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0016	ug/L	.0014	ug/L	114.3	80.0 − 120.0	MS	08−MAY−21 19:34	210508−1
	Uranium−238	.206	ug/L	.2	ug/L	103	80.0 − 120.0	MS	08−MAY−21 19:34	210508−1
	Aluminum	50.7	ug/L	50	ug/L	101.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Antimony	3.07	ug/L	3	ug/L	102.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Arsenic	4.87	ug/L	5	ug/L	97.4	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Barium	4.19	ug/L	4	ug/L	104.7	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Beryllium	.563	ug/L	.5	ug/L	112.6	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Cadmium	1.01	ug/L	1	ug/L	101.4	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Calcium	230	ug/L	200	ug/L	115.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Chromium	10.1	ug/L	10	ug/L	101.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Cobalt	1.04	ug/L	1	ug/L	103.7	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Lead	2.1	ug/L	2	ug/L	105.1	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Magnesium	31.2	ug/L	30	ug/L	104.1	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Manganese	5.09	ug/L	5	ug/L	101.8	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Molybdenum	1.02	ug/L	1	ug/L	102.1	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Nickel	2.09	ug/L	2	ug/L	104.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Potassium	307	ug/L	300	ug/L	102.4	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Selenium	4.78	ug/L	5	ug/L	95.6	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Silver	1.02	ug/L	1	ug/L	101.9	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Sodium	266	ug/L	250	ug/L	106.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Thallium	2.04	ug/L	2	ug/L	102.2	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Thorium	2.21	ug/L	2	ug/L	110.5	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Vanadium	20.3	ug/L	20	ug/L	101.3	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Zinc	19.5	ug/L	20	ug/L	97.7	80.0 − 120.0	MS	08−MAY−21 22:32	210508−2
	Uranium−235	.0015	ug/L	.0014	ug/L	107.1	80.0 − 120.0	MS	09−MAY−21 11:47	210509−3
	Uranium−238	.199	ug/L	.2	ug/L	99.3	80.0 − 120.0	MS	09−MAY−21 11:47	210509−3
	Copper	2.2	ug/L	2	ug/L	110	80.0 − 120.0	MS	09−MAY−21 13:07	210509−7
	Iron	103	ug/L	100	ug/L	102.6	80.0 − 120.0	MS	09−MAY−21 13:07	210509−7
	Calcium	223	ug/L	200	ug/L	111.3	80.0 − 120.0	MS	09−MAY−21 20:05	210509−10
	Manganese	5.03	ug/L	5	ug/L	100.7	80.0 − 120.0	MS	09−MAY−21 20:05	210509−10
	Sodium	263	ug/L	250	ug/L	105	80.0 − 120.0	MS	09−MAY−21 20:05	210509−10

***Analytical Methods:**

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
MS	SW846 3005A/6020B									

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541037

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	08−MAY−21 19:32	210508−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	08−MAY−21 19:32	210508−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	08−MAY−21 22:29	210508−2
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	08−MAY−21 22:29	210508−2
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	08−MAY−21 22:29	210508−2
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	08−MAY−21 22:29	210508−2
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	08−MAY−21 22:29	210508−2
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	09−MAY−21 11:45	210509−3
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	09−MAY−21 11:45	210509−3
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	09−MAY−21 13:05	210509−7
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	09−MAY−21 13:05	210509−7
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	09−MAY−21 20:02	210509−10
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	09−MAY−21 20:02	210509−10
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	09−MAY−21 20:02	210509−10

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541037

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 19:41	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 19:41	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	08−MAY−21 22:47	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	08−MAY−21 22:47	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Molybdenum	0.768	+/−1	J	0.2	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	08−MAY−21 22:47	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	08−MAY−21 22:47	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:47	210508−2
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	09−MAY−21 11:54	210509−3
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	09−MAY−21 11:54	210509−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 13:15	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 13:15	210509−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 20:20	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 20:20	210509−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 20:20	210509−10

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541037

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 21:10	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 21:10	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	08−MAY−21 22:57	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	08−MAY−21 22:57	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Molybdenum	0.56	+/−1	J	0.2	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	08−MAY−21 22:57	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	08−MAY−21 22:57	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Thorium	0.958	+/−2	J	0.7	2.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	08−MAY−21 22:57	210508−2
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	09−MAY−21 12:09	210509−3
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	09−MAY−21 12:09	210509−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 13:20	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 13:20	210509−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 20:31	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 20:31	210509−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 20:31	210509−10

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541037

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 21:31	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 21:31	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 01:58	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 01:58	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 01:58	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 01:58	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 01:58	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 15:07	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 15:07	210509−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 22:12	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 22:12	210509−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 22:12	210509−10
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 21:49	210508−1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541037

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 21:49	210508−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 02:41	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 02:41	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 02:41	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 02:41	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 02:41	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 15:30	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 15:30	210509−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 22:41	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 22:41	210509−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 22:41	210509−10
CCB05										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	08−MAY−21 22:07	210508−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	08−MAY−21 22:07	210508−1

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541037

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 03:17	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 03:17	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 03:17	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 03:17	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 03:17	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 15:50	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 15:50	210509−7
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 23:09	210509−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 23:09	210509−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 23:09	210509−10
CCB06										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 03:53	210508−2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541037

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	09−MAY−21 03:53	210508−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	09−MAY−21 03:53	210508−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	09−MAY−21 03:53	210508−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	09−MAY−21 03:53	210508−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	09−MAY−21 03:53	210508−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	09−MAY−21 16:10	210509−7
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	09−MAY−21 16:10	210509−7

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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PREPARATION BLANK SUMMARY

SDG NO. 541037
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204799660								
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					08−MAY−21 19:36	210508−1
	Uranium−238	0.024	ug/L					08−MAY−21 19:36	210508−1
ICSAB01									
	Uranium−235	0.144	ug/L	.145	ug/L	99	80.0 − 120.0	08−MAY−21 19:37	210508−1
	Uranium−238	20.0	ug/L	19.86	ug/L	101	80.0 − 120.0	08−MAY−21 19:37	210508−1

METALS
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Interference Check Sample

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	94300	ug/L	100000	ug/L	94.3	80.0 − 120.0	09−MAY−21 20:09	210509−10
	Manganese	5.43	ug/L					09−MAY−21 20:09	210509−10
	Sodium	95500	ug/L	100000	ug/L	95.5	80.0 − 120.0	09−MAY−21 20:09	210509−10
ICSAB01									
	Calcium	95400	ug/L	100000	ug/L	95.4	80.0 − 120.0	09−MAY−21 20:13	210509−10
	Manganese	24.7	ug/L	25.72	ug/L	96.2	80.0 − 120.0	09−MAY−21 20:13	210509−10
	Sodium	98000	ug/L	100000	ug/L	98	80.0 − 120.0	09−MAY−21 20:13	210509−10

METALS
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Interference Check Sample

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	90100	ug/L	100000	ug/L	90.1	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Antimony	0.131	ug/L					08−MAY−21 22:36	210508−2
	Arsenic	0.128	ug/L					08−MAY−21 22:36	210508−2
	Barium	2.56	ug/L					08−MAY−21 22:36	210508−2
	Beryllium	0.003	ug/L					08−MAY−21 22:36	210508−2
	Cadmium	0.878	ug/L					08−MAY−21 22:36	210508−2
	Calcium	93600	ug/L	100000	ug/L	93.6	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Chromium	0.78	ug/L					08−MAY−21 22:36	210508−2
	Cobalt	0.47	ug/L					08−MAY−21 22:36	210508−2
	Lead	0.214	ug/L					08−MAY−21 22:36	210508−2
	Magnesium	89700	ug/L	100000	ug/L	89.7	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Manganese	4.69	ug/L					08−MAY−21 22:36	210508−2
	Molybdenum	1930	ug/L	2000	ug/L	96.5	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Nickel	0.419	ug/L					08−MAY−21 22:36	210508−2
	Potassium	90700	ug/L	100000	ug/L	90.7	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Selenium	−0.007	ug/L					08−MAY−21 22:36	210508−2
	Silver	0.14	ug/L					08−MAY−21 22:36	210508−2
	Sodium	99700	ug/L	100000	ug/L	99.7	80.0 − 120.0	08−MAY−21 22:36	210508−2
	Thallium	0.101	ug/L					08−MAY−21 22:36	210508−2
	Thorium	1.8	ug/L					08−MAY−21 22:36	210508−2
	Vanadium	0.002	ug/L					08−MAY−21 22:36	210508−2
	Zinc	3.09	ug/L					08−MAY−21 22:36	210508−2
ICSAB01									
	Aluminum	90000	ug/L	100000	ug/L	90	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Antimony	20.6	ug/L	20	ug/L	103	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Arsenic	20.4	ug/L	20	ug/L	102	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Barium	21.7	ug/L	22.35	ug/L	96.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Beryllium	18.2	ug/L	20	ug/L	91	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Cadmium	20.2	ug/L	20.72	ug/L	97.5	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Calcium	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	08−MAY−21 22:39	210508−2

METALS
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Interference Check Sample

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Chromium	19.8	ug/L	20	ug/L	98.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Cobalt	19.1	ug/L	20.65	ug/L	92.3	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Lead	19.1	ug/L	20	ug/L	95.5	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Magnesium	88100	ug/L	100000	ug/L	88.1	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Manganese	23.6	ug/L	25.72	ug/L	91.6	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Molybdenum	1960	ug/L	2000	ug/L	97.8	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Nickel	18.4	ug/L	20	ug/L	91.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Potassium	89900	ug/L	100000	ug/L	89.9	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Selenium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Silver	18.5	ug/L	20	ug/L	92.6	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Sodium	98000	ug/L	100000	ug/L	98	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Thallium	18.9	ug/L	20	ug/L	94.6	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Thorium	21.1	ug/L	20	ug/L	105	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Vanadium	19.5	ug/L	20	ug/L	97.4	80.0 − 120.0	08−MAY−21 22:39	210508−2
	Zinc	21.8	ug/L	20	ug/L	109	80.0 − 120.0	08−MAY−21 22:39	210508−2

METALS
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Interference Check Sample

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					09−MAY−21 11:49	210509−3
	Uranium−238	0.023	ug/L					09−MAY−21 11:49	210509−3
ICSAB01									
	Uranium−235	0.148	ug/L	.145	ug/L	102	80.0 − 120.0	09−MAY−21 11:51	210509−3
	Uranium−238	20.2	ug/L	19.86	ug/L	101	80.0 − 120.0	09−MAY−21 11:51	210509−3

METALS
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Interference Check Sample

SDG No: 541037

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Copper	0.239	ug/L					09−MAY−21 13:09	210509−7
	Iron	80000	ug/L	100000	ug/L	80	80.0 − 120.0	09−MAY−21 13:09	210509−7
ICSAB01									
	Copper	17.7	ug/L	20	ug/L	88.6	80.0 − 120.0	09−MAY−21 13:11	210509−7
	Iron	80900	ug/L	100000	ug/L	81	80.0 − 120.0	09−MAY−21 13:11	210509−7

METALS
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Matrix Spike Summary

SDG NO. 541037 **Client ID** ML−3−1−04122021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541037001 **Spike ID:** 1204799662

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Antimony	ug/L	75−125	52.4		1.00	U	50.0	103		MS
Arsenic	ug/L	75−125	46.9		2.00	U	50.0	92.7		MS
Barium	ug/L	75−125	55.9		5.96		50.0	99.8		MS
Beryllium	ug/L	75−125	53.0		0.200	U	50.0	106		MS
Cadmium	ug/L	75−125	50.8		0.300	U	50.0	101		MS
Calcium	ug/L	75−125	7520		5580		2000	96.5		MS
Chromium	ug/L	75−125	48.5		3.00	U	50.0	95.1		MS
Cobalt	ug/L	75−125	47.2		0.300	U	50.0	94.2		MS
Copper	ug/L	75−125	54.2		2.26		50.0	104		MS
Iron	ug/L	75−125	2080		55.4	J	2000	101		MS
Lead	ug/L	75−125	50.6		0.500	U	50.0	101		MS
Magnesium	ug/L	75−125	3500		1520		2000	99.1		MS
Manganese	ug/L	75−125	116		69.2		50.0	93.6		MS
Molybdenum	ug/L	75−125	52.1		0.299	J	50.0	104		MS
Nickel	ug/L	75−125	48.1		0.765	J	50.0	94.6		MS
Potassium	ug/L	75−125	3830		1850		2000	98.7		MS
Selenium	ug/L	75−125	50.3		2.00	U	50.0	100		MS
Silver	ug/L	75−125	51.4		0.300	U	50.0	103		MS
Sodium	ug/L		11200		9200		2000	100	N/A	MS
Thallium	ug/L	75−125	50.5		0.600	U	50.0	101		MS
Thorium	ug/L	75−125	50.1		0.700	U	50.0	99.7		MS
Uranium−235	ug/L	75−125	0.369		0.0100	U	0.360	103		MS

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METALS
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Matrix Spike Summary

SDG NO. 541037 **Client ID** ML−3−1−04122021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541037001 **Spike ID:** 1204799662

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−238	ug/L	75−125	51.1		0.109	J	49.6	103		MS
Vanadium	ug/L	75−125	48.6		3.30	U	50.0	94.7		MS
Zinc	ug/L	75−125	72.9		27.6		50.0	90.7		MS
Aluminum	ug/L	75−125	2000		19.3	U	2000	99.3		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541037 **Client ID** ML−3−1−04122021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541037001 **Spike ID:** 1204799663

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	1920		19.3	U	2000	95.1		MS
Antimony	ug/L	75−125	50.8		1.00	U	50.0	99.8		MS
Arsenic	ug/L	75−125	47.3		2.00	U	50.0	93.4		MS
Barium	ug/L	75−125	56.2		5.96		50.0	100		MS
Beryllium	ug/L	75−125	52.2		0.200	U	50.0	104		MS
Cadmium	ug/L	75−125	49.5		0.300	U	50.0	98.7		MS
Calcium	ug/L	75−125	7180		5580		2000	79.6		MS
Chromium	ug/L	75−125	46.8		3.00	U	50.0	91.8		MS
Cobalt	ug/L	75−125	46.8		0.300	U	50.0	93.4		MS
Copper	ug/L	75−125	53.5		2.26		50.0	102		MS
Iron	ug/L	75−125	2080		55.4	J	2000	101		MS
Lead	ug/L	75−125	50.9		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	3400		1520		2000	94		MS
Manganese	ug/L	75−125	112		69.2		50.0	86		MS
Molybdenum	ug/L	75−125	50.2		0.299	J	50.0	99.8		MS
Nickel	ug/L	75−125	47.3		0.765	J	50.0	93		MS
Potassium	ug/L	75−125	3690		1850		2000	91.8		MS
Selenium	ug/L	75−125	48.4		2.00	U	50.0	96.6		MS
Silver	ug/L	75−125	50.4		0.300	U	50.0	101		MS
Sodium	ug/L		10900		9200		2000	85.2	N/A	MS
Thallium	ug/L	75−125	49.8		0.600	U	50.0	99.4		MS
Thorium	ug/L	75−125	50.5		0.700	U	50.0	101		MS

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Matrix Spike Duplicate Summary

SDG NO. 541037 **Client ID** ML−3−1−04122021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541037001 **Spike ID:** 1204799663

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.356		0.0100	U	0.360	98.8		MS
Uranium−238	ug/L	75−125	50.3		0.109	J	49.6	101		MS
Vanadium	ug/L	75−125	46.9		3.30	U	50.0	91.3		MS
Zinc	ug/L	75−125	71.7		27.6		50.0	88.4		MS

***Analytical Methods:**

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Metals
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Duplicate Sample Summary

SDG No.: 541037 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** ML−3−1−04122021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799662 **Duplicate ID:** 1204799663 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2000		1920		4.32		MS
Antimony	ug/L	+/−20	52.4		50.8		3.25		MS
Arsenic	ug/L	+/−20	46.9		47.3		.773		MS
Barium	ug/L	+/−20	55.9		56.2		.528		MS
Beryllium	ug/L	+/−20	53.0		52.2		1.49		MS
Cadmium	ug/L	+/−20	50.8		49.5		2.68		MS
Calcium	ug/L	+/−20	7520		7180		4.61		MS
Chromium	ug/L	+/−20	48.5		46.8		3.47		MS
Cobalt	ug/L	+/−20	47.2		46.8		.869		MS
Copper	ug/L	+/−20	54.2		53.5		1.26		MS
Iron	ug/L	+/−20	2080		2080		.37		MS
Lead	ug/L	+/−20	50.6		50.9		.514		MS
Magnesium	ug/L	+/−20	3500		3400		2.93		MS
Manganese	ug/L	+/−20	116		112		3.35		MS
Molybdenum	ug/L	+/−20	52.1		50.2		3.7		MS
Nickel	ug/L	+/−20	48.1		47.3		1.64		MS
Potassium	ug/L	+/−20	3830		3690		3.65		MS
Selenium	ug/L	+/−20	50.3		48.4		3.8		MS
Silver	ug/L	+/−20	51.4		50.4		1.86		MS
Sodium	ug/L	+/−20	11200		10900		2.7		MS
Thallium	ug/L	+/−20	50.5		49.8		1.41		MS
Thorium	ug/L	+/−20	50.1		50.5		.829		MS
Uranium−235	ug/L	+/−20	0.369		0.356		3.67		MS
Uranium−238	ug/L	+/−20	51.1		50.3		1.55		MS
Vanadium	ug/L	+/−20	48.6		46.9		3.5		MS
Zinc	ug/L	+/−20	72.9		71.7		1.62		MS

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Duplicate Sample Summary

SDG No.: 541037 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** ML−3−1−04122021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799662 **Duplicate ID:** 1204799663 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

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Laboratory Control Sample Summary

SDG NO. 541037

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799661								
	Uranium−238	ug/L	49.6	49.6		99.9	80−120	MS
	Vanadium	ug/L	50.0	46.4		92.7	80−120	MS
	Zinc	ug/L	50.0	48.0		96	80−120	MS
	Aluminum	ug/L	2000	1880		94	80−120	MS
	Antimony	ug/L	50.0	48.9		97.9	80−120	MS
	Arsenic	ug/L	50.0	45.7		91.5	80−120	MS
	Barium	ug/L	50.0	49.4		98.8	80−120	MS
	Beryllium	ug/L	50.0	50.2		100	80−120	MS
	Cadmium	ug/L	50.0	48.4		96.8	80−120	MS
	Calcium	ug/L	2000	1950		97.5	80−120	MS
	Chromium	ug/L	50.0	45.6		91.2	80−120	MS
	Cobalt	ug/L	50.0	45.9		91.9	80−120	MS
	Copper	ug/L	50.0	50.8		102	80−120	MS
	Iron	ug/L	2000	1960		98.2	80−120	MS
	Lead	ug/L	50.0	49.6		99.3	80−120	MS
	Magnesium	ug/L	2000	1920		96	80−120	MS
	Manganese	ug/L	50.0	46.3		92.7	80−120	MS
	Molybdenum	ug/L	50.0	49.6		99.2	80−120	MS
	Nickel	ug/L	50.0	46.4		92.8	80−120	MS
	Potassium	ug/L	2000	1900		94.9	80−120	MS
	Selenium	ug/L	50.0	49.6		99.1	80−120	MS
	Silver	ug/L	50.0	49.8		99.6	80−120	MS
	Sodium	ug/L	2000	2030		102	80−120	MS
	Thallium	ug/L	50.0	48.9		97.8	80−120	MS
	Thorium	ug/L	50.0	48.0		95.9	80−120	MS
	Uranium−235	ug/L	0.360	0.346		96	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

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Serial Dilution Sample Summary

SDG NO. 541037 **Client ID** ML-3-1-04122021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541037001 **Serial Dilution ID:** 1204799664

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	5.96		5.89	J	1.208			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	5580		5270		5.581		20	MS
Chromium	3	U	15	U				MS
Cobalt	.3	U	1.5	U				MS
Copper	2.26		2.79	J	23.067			MS
Iron	55.4	J	165	U	13.791			MS
Lead	.5	U	2.5	U				MS
Magnesium	1520		1460		3.67		20	MS
Manganese	69.2		68.4		1.08			MS
Molybdenum	.299	J	1	U	115.719			MS
Nickel	.765	J	3	U	11.111			MS
Potassium	1850		1740		6.059			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	9200		9020		1.946		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium-235	.01	U	.05	U				MS
Uranium-238	.109	J	.335	U	38.863			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	27.6		34.1	J	23.785			MS

METALS
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Serial Dilution Sample Summary

SDG NO. 541037 **Client ID:** ML−3−1−04122021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541037001 **Serial Dilution ID:** 1204799664

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

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SAMPLE PREPARATION SUMMARY

SDG No: 541037 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2117217							
1204799660	MB for batch 2117217	MB	G	20−APR−21	50mL	50mL	
1204799661	LCS for batch 2117217	LCS	G	20−APR−21	50mL	50mL	
1204799662	ML−3−1−04122021S	MS	G	20−APR−21	50mL	50mL	
1204799663	ML−3−1−04122021SD	MSD	G	20−APR−21	50mL	50mL	
541037001	ML−3−1−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037002	ML−3−1−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037003	MW−S35−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037004	MW−S35−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037005	MW−SD37−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037006	MW−SD37−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037007	HA20−CMT−3I−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037008	HA20−CMT−3I−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037009	MW−BS25−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037010	MW−BS25−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037011	MW−SD42A−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037012	MW−SD42A−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037013	BEW−2−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037014	BEW−2−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037015	HA20−CMT−4S−04122021	SAMPLE	G	20−APR−21	50mL	50mL	

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SAMPLE PREPARATION SUMMARY

SDG No: 541037 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
541037016	HA20−CMT−4S−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037017	MW−S09−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037018	MW−S09−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037019	MW−SD44−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541037020	MW−SD44−04122021	SAMPLE	G	20−APR−21	50mL	50mL	

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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:25:16																							X	X		
S10	1	19:27:03																							X	X		
S100	1	19:28:50																							X	X		
ICV01	1	19:30:36																							X	X		
ICB01	1	19:32:24																							X	X		
CRDL01	1	19:34:12																							X	X		
ICSA01	1	19:36:00																							X	X		
ICSAB01	1	19:37:48																							X	X		
CCV01	1	19:39:36																							X	X		
CCB01	1	19:41:23																							X	X		
ZZZZZZ	1	19:43:11																										
ZZZZZZ	1	19:44:58																										
ZZZZZZ	1	19:46:44																										
ZZZZZZ	1	19:48:31																										
ZZZZZZ	1	19:50:18																										
ZZZZZZ	1	19:52:05																										
CCV	1	19:53:52																							X	X		
CCB	1	19:55:40																							X	X		
ZZZZZZ	1	19:57:28																										
ZZZZZZ	1	19:59:14																										
ZZZZZZ	1	20:01:01																										
ZZZZZZ	1	20:02:48																										
ZZZZZZ	5	20:04:35																										
ZZZZZZ	1	20:06:22																										
ZZZZZZ	1	20:08:08																										
ZZZZZZ	1	20:09:55																										
ZZZZZZ	1	20:11:42																										
ZZZZZZ	1	20:13:28																										
CCV	1	20:15:16																							X	X		
CCB	1	20:17:04																							X	X		
ZZZZZZ	1	20:18:51																										
ZZZZZZ	1	20:20:37																										
ZZZZZZ	1	20:22:24																										
ZZZZZZ	1	20:24:11																										
ZZZZZZ	1	20:25:57																										
ZZZZZZ	1	20:27:44																										
ZZZZZZ	5	20:29:31																										
CCV	1	20:31:18																							X	X		
CCB	1	20:33:05																							X	X		
ZZZZZZ	1	20:34:53																										
ZZZZZZ	1	20:36:40																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	20:38:26																										
ZZZZZZ	1	20:40:13																										
ZZZZZZ	1	20:42:00																										
ZZZZZZ	1	20:43:47																										
ZZZZZZ	1	20:45:33																										
ZZZZZZ	1	20:47:20																										
CCV	1	20:49:07																							X	X		
CCB	1	20:50:55																							X	X		
ZZZZZZ	1	20:52:42																										
ZZZZZZ	1	20:54:29																										
ZZZZZZ	1	20:56:16																										
ZZZZZZ	1	20:58:02																										
ZZZZZZ	1	20:59:49																										
ZZZZZZ	1	21:01:35																										
ZZZZZZ	1	21:03:22																										
ZZZZZZ	1	21:05:09																										
ZZZZZZ	1	21:06:55																										
CCV02	1	21:08:42																							X	X		
CCB02	1	21:10:30																							X	X		
1204799660	1	21:12:18																							X	X		
1204799661	1	21:14:04																							X	X		
541037001	1	21:15:51																							X	X		
1204799662	1	21:17:38																							X	X		
1204799663	1	21:19:24																							X	X		
ZZZZZZ	1	21:21:11																										
1204799664	5	21:22:57																							X	X		
541037002	1	21:24:44																							X	X		
541037003	1	21:26:31																							X	X		
541037004	1	21:28:17																							X	X		
CCV03	1	21:30:05																							X	X		
CCB03	1	21:31:53																							X	X		
541037005	1	21:33:40																							X	X		
541037006	1	21:35:27																							X	X		
541037007	1	21:37:13																							X	X		
541037008	1	21:39:00																							X	X		
541037009	1	21:40:46																							X	X		
541037010	1	21:42:33																							X	X		
541037011	1	21:44:20																							X	X		
541037012	1	21:46:07																							X	X		
CCV04	1	21:47:54																							X	X		
CCB04	1	21:49:42																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	21:51:29																										
541037014	1	21:53:16																							X	X		
541037015	1	21:55:03																							X			
541037016	1	21:56:49																							X			
541037017	1	21:58:36																							X	X		
541037018	1	22:00:23																							X	X		
541037019	1	22:02:09																							X	X		
541037020	1	22:03:56																							X	X		
CCV05	1	22:05:43																							X	X		
CCB05	1	22:07:31																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	22:14:41	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	22:18:18	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	22:21:54	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	22:25:31	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	22:29:07	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	22:32:43	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	22:36:19	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	22:39:55	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	22:43:32	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	22:47:08	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	22:50:45	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	22:54:21	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	22:57:58	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	23:01:35																										
ZZZZZZ	1	23:05:11																										
ZZZZZZ	1	23:08:48																										
ZZZZZZ	1	23:12:25																										
ZZZZZZ	1	23:16:00																										
ZZZZZZ	1	23:19:37																										
CCV	1	23:23:15	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	23:26:52	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	23:30:29																										
ZZZZZZ	1	23:34:05																										
ZZZZZZ	1	23:37:42																										
ZZZZZZ	1	23:41:17																										
ZZZZZZ	5	23:44:53																										
ZZZZZZ	1	23:48:29																										
ZZZZZZ	1	23:52:06																										
ZZZZZZ	1	23:55:43																										
ZZZZZZ	1	23:59:20																										
ZZZZZZ	1	00:02:55																										
CCV	1	00:06:32	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	00:10:09	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:13:46																										
ZZZZZZ	1	00:17:23																										
ZZZZZZ	1	00:21:00																										
ZZZZZZ	1	00:24:35																										
ZZZZZZ	1	00:28:11																										
ZZZZZZ	1	00:31:47																										
ZZZZZZ	5	00:35:23																										
CCV	1	00:39:01	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB	1	00:42:38	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:46:15																										
ZZZZZZ	1	00:49:52																										
ZZZZZZ	1	00:53:28																										
ZZZZZZ	1	00:57:05																										
ZZZZZZ	1	01:00:41																										
ZZZZZZ	1	01:04:17																										
ZZZZZZ	1	01:07:53																										
ZZZZZZ	1	01:11:28																										
ZZZZZZ	1	01:15:05																										
CCV	1	01:18:44	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	01:22:21	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	01:25:59																										
ZZZZZZ	1	01:29:35																										
ZZZZZZ	1	01:33:10																										
ZZZZZZ	1	01:36:47																										
ZZZZZZ	1	01:40:23																										
ZZZZZZ	1	01:44:00																										
ZZZZZZ	1	01:47:36																										
ZZZZZZ	1	01:51:12																										
CCV03	1	01:54:50	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	01:58:27	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
1204799660	1	02:02:05	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
1204799661	1	02:05:41	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037001	1	02:09:17	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
1204799662	1	02:12:53	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
1204799663	1	02:16:29	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	02:20:05																										
1204799664	5	02:23:40	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037002	1	02:27:16	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037003	1	02:30:52	X	X	X	X	X	X		X	X			X	X	X	X	X	X	X	X		X	X			X	X
541037004	1	02:34:28	X	X	X	X	X	X		X	X			X	X	X	X	X	X	X	X		X	X			X	X
CCV04	1	02:38:04	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	02:41:40	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037005	1	02:45:17	X	X	X	X	X	X		X	X			X	X	X	X	X	X	X	X		X	X			X	X
541037006	1	02:48:53	X	X	X	X	X	X		X	X			X	X	X	X	X	X	X	X		X	X			X	X
541037007	1	02:52:29	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X	X			X	X
541037008	1	02:56:05	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X	X			X	X
541037009	1	02:59:41	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037010	1	03:03:16	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037011	1	03:06:52	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541037

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 08-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210508-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541037012	1	03:10:28	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	X	X			X	X
CCV05	1	03:14:04	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	03:17:40	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037013	1	03:21:17	X	X	X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037014	1	03:24:53	X	X	X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037015	1	03:28:29	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037016	1	03:32:04	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037017	1	03:35:40	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037018	1	03:39:16	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037019	1	03:42:52	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
541037020	1	03:46:27	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCV06	1	03:50:04	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X
CCB06	1	03:53:41	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210509-10

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:47:56							X							X						X						
S10	1	19:51:33							X							X						X						
S100	1	19:55:10							X							X						X						
ICV01	1	19:58:46							X							X						X						
ICB01	1	20:02:22							X							X						X						
CRDL01	1	20:05:59							X							X						X						
ICSA01	1	20:09:35							X							X						X						
ICSAB01	1	20:13:11							X							X						X						
CCV01	1	20:16:47							X							X						X						
CCB01	1	20:20:24							X							X						X						
LR01	1	20:24:01							X							X						X						
CCV02	1	20:27:37							X							X						X						
CCB02	1	20:31:14							X							X						X						
ZZZZZZ	1	20:34:50																										
ZZZZZZ	1	20:38:27																										
ZZZZZZ	10	20:42:04																										
ZZZZZZ	10	20:45:41																										
ZZZZZZ	10	20:49:17																										
ZZZZZZ	10	20:52:54																										
ZZZZZZ	10	20:56:31																										
ZZZZZZ	50	21:00:08																										
ZZZZZZ	10	21:03:44																										
ZZZZZZ	10	21:07:20																										
CCV	1	21:10:57							X							X						X						
CCB	1	21:14:33							X							X						X						
ZZZZZZ	1	21:18:10																										
ZZZZZZ	1	21:21:46																										
ZZZZZZ	10	21:25:22																										
ZZZZZZ	10	21:28:58																										
ZZZZZZ	10	21:32:34																										
ZZZZZZ	50	21:36:10																										
CCV	1	21:39:47							X							X						X						
CCB	1	21:43:23							X							X						X						
ZZZZZZ	10	21:47:00																										
ZZZZZZ	10	21:50:36																										
ZZZZZZ	10	21:54:12																										
ZZZZZZ	10	21:57:47																										
ZZZZZZ	10	22:01:24																										
ZZZZZZ	10	22:05:00																										
CCV03	1	22:08:37							X							X						X						
CCB03	1	22:12:14							X							X						X						

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210509-10

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	22:15:51																										
ZZZZZZ	1	22:19:27																										
541037003	10	22:23:03							X													X						
541037004	10	22:26:39							X													X						
541037005	10	22:30:15							X													X						
541037006	10	22:33:51							X													X						
CCV04	1	22:37:28							X							X						X						
CCB04	1	22:41:04							X							X						X						
541037007	10	22:44:41																				X						
541037008	10	22:48:17																				X						
541037011	10	22:51:53														X												
541037012	10	22:55:28														X												
541037013	10	22:59:04							X																			
541037014	10	23:02:40							X																			
CCV05	1	23:06:18							X							X						X						
CCB05	1	23:09:55							X							X						X						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210509-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	11:38:45																							X	X		
S10	1	11:40:32																							X	X		
S100	1	11:42:18																							X	X		
ICV01	1	11:44:04																							X	X		
ICB01	1	11:45:51																							X	X		
CRDL01	1	11:47:38																							X	X		
ICSA01	1	11:49:26																							X	X		
ICSAB01	1	11:51:14																							X	X		
CCV01	1	11:53:01																							X	X		
CCB01	1	11:54:49																							X	X		
ZZZZZZ	1	11:56:35																										
ZZZZZZ	1	11:58:22																										
ZZZZZZ	1	12:00:10																										
541037013	1	12:01:59																							X	X		
541037015	2	12:03:46																								X		
541037016	2	12:05:33																								X		
CCV02	1	12:07:21																							X	X		
CCB02	1	12:09:09																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210509-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	12:57:04										X	X															
S10	1	12:59:04										X	X															
S100	1	13:01:04										X	X															
ICV01	1	13:03:03										X	X															
ICB01	1	13:05:03										X	X															
CRDL01	1	13:07:03										X	X															
ICSA01	1	13:09:02										X	X															
ICSAB01	1	13:11:02										X	X															
CCV01	1	13:13:01										X	X															
CCB01	1	13:15:01										X	X															
LR01	1	13:17:00										X	X															
CCV02	1	13:19:00										X	X															
CCB02	1	13:20:59										X	X															
ZZZZZZ	1	13:22:59																										
ZZZZZZ	1	13:24:59																										
ZZZZZZ	1	13:26:59																										
ZZZZZZ	1	13:28:59																										
ZZZZZZ	1	13:33:14																										
ZZZZZZ	1	13:35:13																										
ZZZZZZ	5	13:37:13																										
CCV	1	13:39:13										X	X															
CCB	1	13:41:13										X	X															
ZZZZZZ	1	13:43:13																										
ZZZZZZ	1	13:45:13																										
ZZZZZZ	1	13:47:12																										
ZZZZZZ	1	13:49:12																										
ZZZZZZ	1	13:51:11																										
ZZZZZZ	1	13:53:10																										
ZZZZZZ	1	13:55:09																										
ZZZZZZ	1	13:57:08																										
ZZZZZZ	1	13:59:07																										
CCV	1	14:01:08										X	X															
CCB	1	14:03:07										X	X															
ZZZZZZ	1	14:05:08																										
ZZZZZZ	1	14:07:08																										
ZZZZZZ	1	14:09:07																										
ZZZZZZ	1	14:11:07																										
ZZZZZZ	1	14:13:06																										
ZZZZZZ	10	14:15:07																										
ZZZZZZ	1	14:17:07																										
ZZZZZZ	10	14:19:07																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541037

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 09-MAY-21 **Data File:** 210509-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	14:21:07																										
ZZZZZZ	1	14:23:07																										
CCV	1	14:25:08										X	X															
CCB	1	14:27:08										X	X															
ZZZZZZ	1	14:29:08																										
ZZZZZZ	1	14:31:08																										
ZZZZZZ	1	14:33:07																										
ZZZZZZ	1	14:35:07																										
ZZZZZZ	1	14:37:06																										
ZZZZZZ	1	14:39:05																										
CCV	1	14:41:05										X	X															
CCB	1	14:43:05										X	X															
ZZZZZZ	1	14:45:06																										
ZZZZZZ	1	14:47:05																										
ZZZZZZ	1	14:49:05																										
ZZZZZZ	1	14:51:04																										
ZZZZZZ	5	14:53:04																										
ZZZZZZ	1	14:55:04																										
ZZZZZZ	1	14:57:03																										
ZZZZZZ	1	14:59:03																										
ZZZZZZ	1	15:01:03																										
ZZZZZZ	1	15:03:02																										
CCV03	1	15:05:03										X	X															
CCB03	1	15:07:03										X	X															
1204799660	1	15:09:04										X	X															
1204799661	1	15:11:04										X	X															
541037001	1	15:13:03										X	X															
1204799662	1	15:15:03										X	X															
1204799663	1	15:17:02										X	X															
ZZZZZZ	1	15:19:01																										
1204799664	5	15:21:00										X	X															
541037002	1	15:22:59										X	X															
541037003	1	15:24:58										X	X															
541037004	1	15:26:57										X	X															
CCV04	1	15:28:57										X	X															
CCB04	1	15:30:56										X	X															
541037005	1	15:32:56										X	X															
541037006	1	15:34:55										X	X															
541037007	1	15:36:54										X	X															
541037008	1	15:38:54										X	X															
541037009	1	15:40:54										X	X															

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL | **Client Sdg:** 541037

Inst Name: ICPMS15 | **Instrument Type:** MS

Start Date: 09-MAY-21 | **End Date:** 09-MAY-21 | **Data File:** 210509-7

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541037010	1	15:42:53										X	X															
541037011	1	15:44:53										X	X															
541037012	1	15:46:52										X	X															
CCV05	1	15:48:52										X	X															
CCB05	1	15:50:52										X	X															
541037013	1	15:52:53										X	X															
541037014	1	15:54:52										X	X															
541037015	1	15:56:52										X	X															
541037016	1	15:58:51										X	X															
541037017	1	16:00:51										X	X															
541037018	1	16:02:51										X	X															
541037019	1	16:04:50										X	X															
541037020	1	16:06:50										X	X															
CCV06	1	16:08:51										X	X															
CCB06	1	16:10:51										X	X															

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
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Instrument Detection Limits

SDG NO. 541037

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
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Linear Ranges

SDG NO. 541037

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117217**
Analyst: Ridge Gleaton
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799661	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799661	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799662	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799662	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799663	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799663	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204799660 MB	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
1204799661 LCS	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037001	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
1204799664 SDILT (541037001)	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
1204799662 MS (541037001)	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
1204799663 MSD (541037001)	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037002	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037003	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037004	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037005	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037006	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037007	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037008	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037009	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037010	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037011	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037012	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037013	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037014	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037015	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037016	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037017	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037018	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037019	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2
541037020	20-APR-2021 16:15:42	Ground Water	50	04/20/21 22:15	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3265774	HYDROCHLORIC ACID	2.5 mL
3267483	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 94 C
Temperature within limits (Y/N)?: y
Thermometer ID: 118957
Hot Block ID: 8
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 12, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541038

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 16, 2021 and April 17, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04122021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541038

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541038

May 12, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 16, 2021 and April 17, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541038001	HA20-CMT-3D2-04122021
541038002	HA20-CMT-3D2-04122021
541038003	MW-BS37-04122021
541038004	MW-BS37-04122021
541038005	EQ Blank1-04122021
541038006	EQ Blank1-04122021
541038007	MW-SD64-04122021
541038008	MW-SD64-04122021
541038009	MW-SD10-04122021
541038010	MW-SD10-04122021
541038011	MW-SD10-04122021DUP
541038012	MW-SD10-04122021DUP
541038013	P-4-04122021
541038014	P-4-04122021
541038015	HA20-CMT-4I-04122021
541038016	HA20-CMT-4I-04122021
541038017	MW-S03-04122021
541038018	MW-S03-04122021
541038019	MW-S26-04122021
541038020	MW-S26-04122021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]: 04122021
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541038

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) (NI)	Dissolved Metals (6020A ICP-MS) (NI)	U-235/U-238 plus Total U Calc. (NI)	Comments (Note: extra sample is required for sample specific QC) (<-- Preservative Type (6))
HA20-CMT-3D2-04122021	4/12/2021	12:40	N	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
MW-BS37-04122021	4/12/2021	13:45	N	Y	GW	U238		2	X	X	X	
EQ Blank1-04122021	4/12/2021	15:00	EB	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
MW-SD64-04122021	4/12/2021	14:20	N	Y	GW	U238		2	X	X	X	
MW-SD10-04122021	4/12/2021	14:20	N	Y	GW	U238		2	X	X	X	
MW-SD10-04122021DUP	4/12/2021	14:25	FD	Y	GW	U238		2	X	X	X	
P-4-04122021	4/12/2021	15:10	N	Y	GW	U238		2	X	X	X	
HA20-CMT-4I-04122021	4/12/2021	15:00	N	Y	GW	U238		2	X	X	X	U-235/U-238 plus Total U Calc. for Total and Dissolved
MW-S03-04122021	4/12/2021	16:00	N	Y	GW	U238		2	X	X	X	
MW-S26-04122021	4/12/2021	15:50	N	Y	GW	U238		2	X	X	X	

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/13/21	11:00	1	[signature]	4/13/21	1100
2	[signature]	4/15/21	1500	2	[signature]	4/16/21	925
3				3			

TAT Requested: Normal: X Rush: _____ Specify: ________

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact? [ ] Yes [ ] No* ***Cooler Temp:*** _____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via Nat. [illegible]

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541038
Received By: STACY BOONE	Date Received: APRIL 16, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 5252 3063 4°c 7734 5252 3637 3°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		/	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		/	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		/	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		/	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		/	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	/			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	/			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: see above
4	Daily check performed and passed on IR temperature gun?	/			Temperature Device Serial #: IR21-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	/			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			/	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	/			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	/			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	/			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	/			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	/			
13	COC form is properly signed in relinquished/received sections?	/			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7734 5252 3512 4°c 7734 5252 3420 3°c

PM (or PMA) review: Initials DS Date 4/19/21 Page 1 of 1

GL-CHL-SR-001 Rev 7

Work Order Containers

Sample ID: **541038001**
Client Sample ID: **HA20−CMT−3D2−04122021**
Description: **Ground Water**

Label: 541038001.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038001.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038002**
Client Sample ID: **HA20−CMT−3D2−04122021**
Description: **Dissolved Ground Water**

Label: 541038002.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038002.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038003**
Client Sample ID: **MW−BS37−04122021**
Description: **Ground Water**

Label: 541038003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to

Work Order Containers

Sample ID: **541038003**
Client Sample ID: **MW−BS37−04122021**
Description: **Ground Water**

Label: 541038003.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038003.01.01 | **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038004**
Client Sample ID: **MW−BS37−04122021**
Description: **Dissolved Ground Water**

Label: 541038004.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038004.01.01 | **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038005**
Client Sample ID: **EQ Blank1−04122021**
Description: **Ground Water**

Label: 541038005.01 | **Type: Plastic 500 ml** | **Preservative: Nitric pH<2**

16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541038005**
Client Sample ID: **EQ Blank1−04122021**
Description: **Ground Water**

Label: 541038005.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038006**
Client Sample ID: **EQ Blank1−04122021**
Description: **Dissolved Ground Water**

Label: 541038006.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038006.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038007**
Client Sample ID: **MW−SD64−04122021**
Description: **Ground Water**

Label: 541038007.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038007.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541038008**
Client Sample ID: **MW−SD64−04122021**
Description: **Dissolved Ground Water**

Label: 541038008.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038008.01.01	**Type: New Undefined**	
09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038009**
Client Sample ID: **MW−SD10−04122021**
Description: **Ground Water**

Label: 541038009.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038009.01.01	**Type: New Undefined**	
09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038010**
Client Sample ID: **MW−SD10−04122021**
Description: **Dissolved Ground Water**

Label: 541038010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to

Work Order Containers

Sample ID: **541038010**
Client Sample ID: **MW−SD10−04122021**
Description: **Dissolved Ground Water**

Label: 541038010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038010.01.01	**Type: New Undefined**	
09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038011**
Client Sample ID: **MW−SD10−04122021DUP**
Description: **Ground Water**

Label: 541038011.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038011.01.01	**Type: New Undefined**	
09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038012**
Client Sample ID: **MW−SD10−04122021DUP**
Description: **Dissolved Ground Water**

Label: 541038012.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541038012**
Client Sample ID: **MW−SD10−04122021DUP**
Description: **Dissolved Ground Water**

Label: 541038012.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038013**
Client Sample ID: **P−4−04122021**
Description: **Ground Water**

Label: 541038013.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038013.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038014**
Client Sample ID: **P−4−04122021**
Description: **Dissolved Ground Water**

Label: 541038014.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 12:36:33	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038014.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541038015**
Client Sample ID: **HA20−CMT−4I−04122021**
Description: **Ground Water**

Label: 541038015.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038015.01.01	Type: New Undefined	
09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038016**
Client Sample ID: **HA20−CMT−4I−04122021**
Description: **Dissolved Ground Water**

Label: 541038016.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038016.01.01	Type: New Undefined	
09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038017**
Client Sample ID: **MW−S03−04122021**
Description: **Ground Water**

Label: 541038017.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to

Work Order Containers

Sample ID: **541038017**
Client Sample ID: **MW−S03−04122021**
Description: **Ground Water**

Label: 541038017.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038017.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038018**
Client Sample ID: **MW−S03−04122021**
Description: **Dissolved Ground Water**

Label: 541038018.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038018.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038019**
Client Sample ID: **MW−S26−04122021**
Description: **Ground Water**

Label: 541038019.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541038019**
Client Sample ID: **MW−S26−04122021**
Description: **Ground Water**

Label: 541038019.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541038020**
Client Sample ID: **MW−S26−04122021**
Description: **Dissolved Ground Water**

Label: 541038020.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

16−APR−21 17:07:59	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:38:31	Hannah Hatherly	Transfered custody to batch 2117219
19−APR−21 19:38:31	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:37:48	Hannah Hatherly	Changed batch_id from 2117219 to
19−APR−21 22:37:48	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541038020.01.01 **Type: New Undefined**

09−MAY−21 17:50:00	Paul Boyd	Transfered custody to batch 2117220
09−MAY−21 17:50:00	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 12 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541038

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batch:</u> 2117220

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2126937

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batch:</u> 2117219

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541038001	HA20-CMT-3D2-04122021
541038002	HA20-CMT-3D2-04122021
541038003	MW-BS37-04122021
541038004	MW-BS37-04122021
541038005	EQ Blank1-04122021
541038006	EQ Blank1-04122021
541038007	MW-SD64-04122021
541038008	MW-SD64-04122021
541038009	MW-SD10-04122021
541038010	MW-SD10-04122021
541038011	MW-SD10-04122021DUP
541038012	MW-SD10-04122021DUP
541038013	P-4-04122021
541038014	P-4-04122021
541038015	HA20-CMT-4I-04122021
541038016	HA20-CMT-4I-04122021
541038017	MW-S03-04122021
541038018	MW-S03-04122021
541038019	MW-S26-04122021
541038020	MW-S26-04122021
1204799665	Method Blank (MB)**ICP-MS**
1204799666	Laboratory Control Sample (LCS)
1204799669	541038001(HA20-CMT-3D2-04122021L) Serial Dilution (SD)
1204799667	541038001(HA20-CMT-3D2-04122021S) Matrix Spike (MS)
1204799668	541038001(HA20-CMT-3D2-04122021SD) Matrix Spike Duplicate (MSD)

Samples 541038001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541038001 (HA20-CMT-3D2-04122021), 541038002 (HA20-CMT-3D2-04122021), 541038003 (MW-BS37-04122021), 541038015 (HA20-CMT-4I-04122021), 541038016 (HA20-CMT-4I-04122021), 541038019 (MW-S26-04122021) and 541038020 (MW-S26-04122021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541038						
	001	**002**	**003**	**015**	**016**	**019**	**020**
Calcium	10X	10X	10X	1X	1X	1X	1X
Manganese	10X	10X	1X	1X	1X	1X	1X
Sodium	10X	10X	1X	10X	10X	10X	10X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541038 GEL Work Order: 541038

The Qualifiers in this report are defined as follows:

*   Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
**   Indicates analyte is a surrogate compound.
J   Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U   Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: | **Name:** **Edmund Frampton**

Date: **12 MAY 2021** | **Title:** **Team Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038001 **BASIS:** As Received **DATE COLLECTED** 12-APR-21

CLIENT ID: HA20-CMT-3D2-04122021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	41.8	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-38-2	Arsenic	8.30	ug/L		2.00	5.00	5.00	1	MS	PRB	05/10/21 11:30	210510-4	2117220
7440-39-3	Barium	42.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-70-2	Calcium	58400	ug/L		800	2000	2000	10	MS	PRB	05/10/21 11:48	210510-4	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-48-4	Cobalt	1.23	ug/L		0.300	1.00	1.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-50-8	Copper	0.976	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7439-89-6	Iron	999	ug/L		33.0	100	100	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7439-95-4	Magnesium	8090	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7439-96-5	Manganese	2280	ug/L		10.0	50.0	50.0	10	MS	PRB	05/10/21 11:48	210510-4	2117220
7439-98-7	Molybdenum	293	ug/L		0.200	1.00	1.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-02-0	Nickel	1.04	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-09-7	Potassium	6280	ug/L		80.0	300	300	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 11:30	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-23-5	Sodium	424000	ug/L		800	2500	2500	10	MS	PRB	05/10/21 11:48	210510-4	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-29-1	Thorium	0.720	ug/L	J	0.700	2.00	2.00	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-61-1	Total Uranium	79.6	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.580	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 18:49	210509-1	2117220
7440-61-1	Uranium-238	79.0	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/09/21 18:49	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 02:10	210509-3	2117220
7440-66-6	Zinc	5.47	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 11:30	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038002 **BASIS:** Filtered **DATE COLLECTED** 12-APR-21

CLIENT ID: HA20-CMT-3D2-04122021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	22.1	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-38-2	Arsenic	7.81	ug/L		2.00	5.00	5.00	1	MS	PRB	05/10/21 11:58	210510-4	2117220
7440-39-3	Barium	44.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-70-2	Calcium	61200	ug/L		800	2000	2000	10	MS	PRB	05/10/21 12:00	210510-4	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-48-4	Cobalt	1.26	ug/L		0.300	1.00	1.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7439-89-6	Iron	925	ug/L		33.0	100	100	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7439-95-4	Magnesium	8430	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7439-96-5	Manganese	2360	ug/L		10.0	50.0	50.0	10	MS	PRB	05/10/21 12:00	210510-4	2117220
7439-98-7	Molybdenum	280	ug/L		0.200	1.00	1.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-02-0	Nickel	1.16	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-09-7	Potassium	6400	ug/L		80.0	300	300	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 11:58	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-23-5	Sodium	437000	ug/L		800	2500	2500	10	MS	PRB	05/10/21 12:00	210510-4	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-61-1	Total Uranium	86.1	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.623	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 18:58	210509-1	2117220
7440-61-1	Uranium-238	85.5	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/09/21 18:58	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 02:28	210509-3	2117220
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 11:58	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038003 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−BS37−04122021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−38−2	Arsenic	2.48	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:03	210510−4	2117220
7440−39−3	Barium	183	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−70−2	Calcium	49100	ug/L		800	2000	2000	10	MS	PRB	05/10/21 12:05	210510−4	2117220
7440−47−3	Chromium	4.87	ug/L	J	3.00	10.0	10.0	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−50−8	Copper	0.325	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7439−89−6	Iron	840	ug/L		33.0	100	100	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7439−95−4	Magnesium	20100	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7439−96−5	Manganese	41.5	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7439−98−7	Molybdenum	1.42	ug/L		0.200	1.00	1.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−09−7	Potassium	47100	ug/L		80.0	300	300	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:03	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−23−5	Sodium	43000	ug/L		80.0	250	250	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−61−1	Total Uranium	0.150	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 18:59	210509−1	2117220
7440−61−1	Uranium−238	0.150	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/09/21 18:59	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 02:31	210509−3	2117220
7440−66−6	Zinc	3.54	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:03	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038004 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−BS37−04122021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−38−2	Arsenic	2.35	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:13	210510−4	2117220
7440−39−3	Barium	171	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−70−2	Calcium	48500	ug/L		80.0	200	200	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7439−89−6	Iron	57.3	ug/L	J	33.0	100	100	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7439−95−4	Magnesium	18300	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7439−96−5	Manganese	22.8	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7439−98−7	Molybdenum	1.20	ug/L		0.200	1.00	1.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−09−7	Potassium	46500	ug/L		80.0	300	300	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:13	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−23−5	Sodium	43100	ug/L		80.0	250	250	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−61−1	Total Uranium	0.0907	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:05	210509−1	2117220
7440−61−1	Uranium−238	0.0907	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:05	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 02:42	210509−3	2117220
7440−66−6	Zinc	5.57	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:13	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038005 **BASIS:** As Received **DATE COLLECTED** 12-APR-21

CLIENT ID: EQ Blank1-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:15	210510-4	2117220
7440-39-3	Barium	3.98	ug/L	J	0.670	4.00	4.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-70-2	Calcium	3540	ug/L		80.0	200	200	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7439-95-4	Magnesium	849	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7439-98-7	Molybdenum	0.254	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-09-7	Potassium	680	ug/L		80.0	300	300	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:15	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-23-5	Sodium	3960	ug/L		80.0	250	250	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:06	210509-1	2117220
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:06	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 02:46	210509-3	2117220
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:15	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038006 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: EQ Blank1−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:17	210510−4	2117220
7440−39−3	Barium	7.41	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−70−2	Calcium	6610	ug/L		80.0	200	200	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7439−95−4	Magnesium	1580	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7439−96−5	Manganese	1.25	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7439−98−7	Molybdenum	0.424	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−09−7	Potassium	1230	ug/L		80.0	300	300	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:17	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−23−5	Sodium	7120	ug/L		80.0	250	250	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:08	210509−1	2117220
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:08	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 02:49	210509−3	2117220
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:17	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038007 **BASIS:** As Received **DATE COLLECTED** 12-APR-21

CLIENT ID: MW-SD64-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	40.3	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:20	210510-4	2117220
7440-39-3	Barium	13.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-70-2	Calcium	19000	ug/L		80.0	200	200	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-48-4	Cobalt	0.710	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-50-8	Copper	15.2	ug/L		0.300	2.00	2.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7439-89-6	Iron	68.4	ug/L	J	33.0	100	100	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7439-95-4	Magnesium	3930	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7439-96-5	Manganese	92.7	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7439-98-7	Molybdenum	5.10	ug/L		0.200	1.00	1.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-02-0	Nickel	1.80	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-09-7	Potassium	3190	ug/L		80.0	300	300	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:20	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-23-5	Sodium	26400	ug/L		80.0	250	250	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-61-1	Total Uranium	0.0766	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:10	210509-1	2117220
7440-61-1	Uranium-238	0.0766	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:10	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 02:53	210509-3	2117220
7440-66-6	Zinc	5.82	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:20	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038008 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−SD64−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:22	210510−4	2117220
7440−39−3	Barium	13.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−70−2	Calcium	19100	ug/L		80.0	200	200	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−48−4	Cobalt	0.649	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−50−8	Copper	12.7	ug/L		0.300	2.00	2.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7439−95−4	Magnesium	4000	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7439−96−5	Manganese	92.1	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7439−98−7	Molybdenum	5.40	ug/L		0.200	1.00	1.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−02−0	Nickel	1.83	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−09−7	Potassium	3240	ug/L		80.0	300	300	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:22	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−23−5	Sodium	26900	ug/L		80.0	250	250	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:12	210509−1	2117220
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:12	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 02:56	210509−3	2117220
7440−66−6	Zinc	4.39	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:22	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038009 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−SD10−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	496	ug/L		19.3	50.0	50.0	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:25	210510−4	2117220
7440−39−3	Barium	21.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−70−2	Calcium	10500	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−48−4	Cobalt	2.40	ug/L		0.300	1.00	1.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−50−8	Copper	1.41	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7439−89−6	Iron	746	ug/L		33.0	100	100	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7439−92−1	Lead	1.10	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7439−95−4	Magnesium	2220	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7439−96−5	Manganese	35.3	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−02−0	Nickel	1.37	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−09−7	Potassium	1770	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:25	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−23−5	Sodium	19100	ug/L		80.0	250	250	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−61−1	Total Uranium	0.534	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:14	210509−1	2117220
7440−61−1	Uranium−238	0.534	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:14	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:00	210509−3	2117220
7440−66−6	Zinc	7.48	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:25	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038010 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−SD10−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:27	210510−4	2117220
7440−39−3	Barium	9.68	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−70−2	Calcium	10400	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−50−8	Copper	0.357	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7439−89−6	Iron	38.0	ug/L	J	33.0	100	100	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7439−95−4	Magnesium	2070	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−02−0	Nickel	0.869	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−09−7	Potassium	1660	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:27	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−23−5	Sodium	19600	ug/L		80.0	250	250	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:15	210509−1	2117220
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:15	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:04	210509−3	2117220
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:27	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038011 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−SD10−04122021DUP **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:30	210510−4	2117220
7440−39−3	Barium	11.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−70−2	Calcium	8700	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−48−4	Cobalt	0.450	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7439−89−6	Iron	195	ug/L		33.0	100	100	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7439−95−4	Magnesium	2560	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7439−96−5	Manganese	3.05	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7439−98−7	Molybdenum	0.354	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−09−7	Potassium	2080	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:30	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−23−5	Sodium	9650	ug/L		80.0	250	250	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:17	210509−1	2117220
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:17	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:07	210509−3	2117220
7440−66−6	Zinc	3.55	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:30	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038012 **BASIS:** Filtered **DATE COLLECTED** 12-APR-21

CLIENT ID: MW-SD10-04122021DUP **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	28.8	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:37	210510-4	2117220
7440-39-3	Barium	11.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-70-2	Calcium	8800	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-48-4	Cobalt	0.397	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-50-8	Copper	0.343	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7439-95-4	Magnesium	2590	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7439-96-5	Manganese	2.75	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7439-98-7	Molybdenum	0.365	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-09-7	Potassium	2090	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:37	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-23-5	Sodium	9730	ug/L		80.0	250	250	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:22	210509-1	2117220
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:22	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:18	210509-3	2117220
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:37	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038013 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: P−4−04122021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:40	210510−4	2117220
7440−39−3	Barium	20.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−70−2	Calcium	24600	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−50−8	Copper	0.499	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7439−89−6	Iron	103	ug/L		33.0	100	100	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7439−95−4	Magnesium	5900	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7439−96−5	Manganese	4.44	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7439−98−7	Molybdenum	0.247	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−02−0	Nickel	1.01	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−09−7	Potassium	3300	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:40	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−23−5	Sodium	29700	ug/L		80.0	250	250	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−61−1	Total Uranium	0.0672	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:24	210509−1	2117220
7440−61−1	Uranium−238	0.0672	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:24	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:22	210509−3	2117220
7440−66−6	Zinc	85.5	ug/L		3.30	20.0	20.0	1	MS	PRB	05/10/21 12:40	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038014 **BASIS:** Filtered **DATE COLLECTED** 12−APR−21

CLIENT ID: P−4−04122021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:42	210510−4	2117220
7440−39−3	Barium	20.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−70−2	Calcium	24000	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−50−8	Copper	2.22	ug/L		0.300	2.00	2.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7439−89−6	Iron	34.0	ug/L	J	33.0	100	100	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7439−95−4	Magnesium	5720	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7439−96−5	Manganese	2.58	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7439−98−7	Molybdenum	0.269	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−02−0	Nickel	1.34	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−09−7	Potassium	3270	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:42	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−23−5	Sodium	29000	ug/L		80.0	250	250	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:26	210509−1	2117220
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:26	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:25	210509−3	2117220
7440−66−6	Zinc	128	ug/L		3.30	20.0	20.0	1	MS	PRB	05/10/21 12:42	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038015 **BASIS:** As Received **DATE COLLECTED** 12-APR-21

CLIENT ID: HA20-CMT-4I-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	350	ug/L		19.3	50.0	50.0	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-38-2	Arsenic	2.91	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:45	210510-4	2117220
7440-39-3	Barium	20.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-70-2	Calcium	29600	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-48-4	Cobalt	1.36	ug/L		0.300	1.00	1.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-50-8	Copper	3.23	ug/L		0.300	2.00	2.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7439-89-6	Iron	1060	ug/L		33.0	100	100	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7439-92-1	Lead	0.955	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7439-95-4	Magnesium	7080	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7439-96-5	Manganese	682	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7439-98-7	Molybdenum	11.1	ug/L		0.200	1.00	1.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-02-0	Nickel	1.43	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-09-7	Potassium	4260	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:45	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-23-5	Sodium	54500	ug/L		800	2500	2500	10	MS	PRB	05/10/21 12:47	210510-4	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-61-1	Total Uranium	27.8	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0643	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:28	210509-1	2117220
7440-61-1	Uranium-238	27.7	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:28	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:29	210509-3	2117220
7440-66-6	Zinc	7.80	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:45	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038016 **BASIS:** Filtered **DATE COLLECTED** 12-APR-21

CLIENT ID: HA20-CMT-4I-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-38-2	Arsenic	2.67	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:50	210510-4	2117220
7440-39-3	Barium	16.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-70-2	Calcium	30100	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-48-4	Cobalt	0.653	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7439-89-6	Iron	280	ug/L		33.0	100	100	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7439-95-4	Magnesium	7210	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7439-96-5	Manganese	662	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7439-98-7	Molybdenum	14.2	ug/L		0.200	1.00	1.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-02-0	Nickel	0.667	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-09-7	Potassium	4270	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 12:50	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-23-5	Sodium	54500	ug/L		800	2500	2500	10	MS	PRB	05/10/21 12:52	210510-4	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-61-1	Total Uranium	27.2	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0644	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:30	210509-1	2117220
7440-61-1	Uranium-238	27.1	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:30	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:32	210509-3	2117220
7440-66-6	Zinc	4.27	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 12:50	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038017 **BASIS:** As Received **DATE COLLECTED** 12-APR-21

CLIENT ID: MW-S03-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	35.7	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 13:00	210510-4	2117220
7440-39-3	Barium	28.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-70-2	Calcium	12900	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-48-4	Cobalt	20.5	ug/L		0.300	1.00	1.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-50-8	Copper	1.52	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7439-89-6	Iron	295	ug/L		33.0	100	100	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7439-95-4	Magnesium	2060	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7439-96-5	Manganese	98.4	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-02-0	Nickel	3.78	ug/L		0.600	2.00	2.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-09-7	Potassium	10500	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 13:00	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-23-5	Sodium	25700	ug/L		80.0	250	250	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-61-1	Total Uranium	0.237	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:31	210509-1	2117220
7440-61-1	Uranium-238	0.237	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:31	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:36	210509-3	2117220
7440-66-6	Zinc	3.92	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 13:00	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038018 **BASIS:** Filtered **DATE COLLECTED** 12-APR-21

CLIENT ID: MW-S03-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	23.2	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 13:05	210510-4	2117220
7440-39-3	Barium	28.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-70-2	Calcium	13900	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-48-4	Cobalt	23.5	ug/L		0.300	1.00	1.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-50-8	Copper	1.35	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7439-89-6	Iron	123	ug/L		33.0	100	100	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7439-92-1	Lead	0.508	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7439-95-4	Magnesium	2210	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7439-96-5	Manganese	90.7	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-02-0	Nickel	3.85	ug/L		0.600	2.00	2.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-09-7	Potassium	11100	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 13:05	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-23-5	Sodium	28400	ug/L		80.0	250	250	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-61-1	Total Uranium	0.111	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:33	210509-1	2117220
7440-61-1	Uranium-238	0.111	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:33	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:40	210509-3	2117220
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 13:05	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038019 **BASIS:** As Received **DATE COLLECTED** 12−APR−21

CLIENT ID: MW−S26−04122021 **LEVEL:** Low **DATE RECEIVED** 16−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	885	ug/L		19.3	50.0	50.0	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 13:10	210510−4	2117220
7440−39−3	Barium	73.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−70−2	Calcium	12600	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−48−4	Cobalt	5.26	ug/L		0.300	1.00	1.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−50−8	Copper	3.67	ug/L		0.300	2.00	2.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7439−89−6	Iron	643	ug/L		33.0	100	100	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7439−95−4	Magnesium	2620	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7439−96−5	Manganese	198	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−02−0	Nickel	6.55	ug/L		0.600	2.00	2.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−09−7	Potassium	2410	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 13:10	210510−4	2117220
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−23−5	Sodium	134000	ug/L		800	2500	2500	10	MS	PRB	05/10/21 13:12	210510−4	2117220
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:35	210509−1	2117220
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:35	210509−1	2117220
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:43	210509−3	2117220
7440−66−6	Zinc	18.8	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/10/21 13:10	210510−4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541038 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541038020 **BASIS:** Filtered **DATE COLLECTED** 12-APR-21

CLIENT ID: MW-S26-04122021 **LEVEL:** Low **DATE RECEIVED** 16-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	819	ug/L		19.3	50.0	50.0	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 13:15	210510-4	2117220
7440-39-3	Barium	73.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-70-2	Calcium	12700	ug/L		80.0	200	200	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-48-4	Cobalt	5.10	ug/L		0.300	1.00	1.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-50-8	Copper	3.57	ug/L		0.300	2.00	2.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7439-95-4	Magnesium	2640	ug/L		10.0	30.0	30.0	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7439-96-5	Manganese	194	ug/L		1.00	5.00	5.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-02-0	Nickel	6.58	ug/L		0.600	2.00	2.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-09-7	Potassium	2420	ug/L		80.0	300	300	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/10/21 13:15	210510-4	2117220
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-23-5	Sodium	137000	ug/L		800	2500	2500	10	MS	PRB	05/10/21 13:17	210510-4	2117220
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 14:21		2126937
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/09/21 19:37	210509-1	2117220
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/09/21 19:37	210509-1	2117220
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/10/21 03:47	210509-3	2117220
7440-66-6	Zinc	20.3	ug/L		3.30	20.0	20.0	1	MS	PRB	05/10/21 13:15	210510-4	2117220

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117220	2117219	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.39	ug/L	0.36	ug/L	108.2	90.0 − 110.0	MS	09−MAY−21 18:33	210509−1
	Uranium−238	53.6	ug/L	49.64	ug/L	108	90.0 − 110.0	MS	09−MAY−21 18:33	210509−1
	Aluminum	5010	ug/L	5050	ug/L	99.2	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Antimony	48.6	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Barium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Beryllium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Cadmium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Calcium	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Chromium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Cobalt	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Copper	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Iron	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Lead	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Magnesium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Manganese	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Molybdenum	48.6	ug/L	50	ug/L	97.2	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Nickel	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Potassium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Silver	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Sodium	5110	ug/L	5000	ug/L	102.1	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Thallium	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Thorium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Vanadium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	10−MAY−21 01:26	210509−3
	Arsenic	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	10−MAY−21 11:00	210510−4
	Calcium	5040	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	10−MAY−21 11:00	210510−4
	Manganese	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	10−MAY−21 11:00	210510−4
	Selenium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	10−MAY−21 11:00	210510−4
	Sodium	5100	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	10−MAY−21 11:00	210510−4
	Zinc	54.1	ug/L	50	ug/L	108.1	90.0 − 110.0	MS	10−MAY−21 11:00	210510−4
CCV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.9	90.0 − 110.0	MS	09−MAY−21 18:42	210509−1

SW846

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Uranium−238	50.4	ug/L	49.64	ug/L	101.6	90.0 − 110.0	MS	09−MAY−21 18:42	210509−1
	Aluminum	5160	ug/L	5050	ug/L	102.3	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Antimony	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Barium	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Beryllium	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Cadmium	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Chromium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Cobalt	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Copper	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Iron	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Lead	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Magnesium	5120	ug/L	5000	ug/L	102.5	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Manganese	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Molybdenum	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Nickel	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Potassium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Silver	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Sodium	5250	ug/L	5000	ug/L	104.9	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Thallium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Thorium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Vanadium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	10−MAY−21 01:44	210509−3
	Arsenic	48.3	ug/L	50	ug/L	96.7	90.0 − 110.0	MS	10−MAY−21 11:13	210510−4
	Calcium	5040	ug/L	5000	ug/L	100.8	90.0 − 110.0	MS	10−MAY−21 11:13	210510−4
	Manganese	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	10−MAY−21 11:13	210510−4
	Selenium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	10−MAY−21 11:13	210510−4
	Sodium	5140	ug/L	5000	ug/L	102.9	90.0 − 110.0	MS	10−MAY−21 11:13	210510−4
	Zinc	54.4	ug/L	50	ug/L	108.8	90.0 − 110.0	MS	10−MAY−21 11:13	210510−4
CCV02										
	Uranium−235	0.37	ug/L	0.36	ug/L	101.7	90.0 − 110.0	MS	09−MAY−21 19:01	210509−1
	Uranium−238	49.9	ug/L	49.64	ug/L	100.6	90.0 − 110.0	MS	09−MAY−21 19:01	210509−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Aluminum	5080	ug/L	5050	ug/L	100.6	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Antimony	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Barium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Beryllium	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Cadmium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Calcium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Chromium	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Cobalt	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Copper	52	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Lead	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Magnesium	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Manganese	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Molybdenum	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Nickel	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Potassium	5080	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Silver	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Sodium	5200	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Thallium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Thorium	53.2	ug/L	50	ug/L	106.3	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Vanadium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	10−MAY−21 01:55	210509−3
	Arsenic	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	10−MAY−21 11:20	210510−4
	Calcium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	MS	10−MAY−21 11:20	210510−4
	Manganese	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	10−MAY−21 11:20	210510−4
	Selenium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	10−MAY−21 11:20	210510−4
	Sodium	5250	ug/L	5000	ug/L	105	90.0 − 110.0	MS	10−MAY−21 11:20	210510−4
	Zinc	55	ug/L	50	ug/L	110.1	90.0 − 110.0 *	MS	10−MAY−21 11:20	210510−4
CCV03										
	Uranium−235	0.37	ug/L	0.36	ug/L	101.4	90.0 − 110.0	MS	09−MAY−21 19:19	210509−1
	Uranium−238	49.3	ug/L	49.64	ug/L	99.3	90.0 − 110.0	MS	09−MAY−21 19:19	210509−1
	Aluminum	5140	ug/L	5050	ug/L	101.8	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Antimony	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Barium	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Beryllium	53	ug/L	50	ug/L	105.9	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Cadmium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Calcium	5040	ug/L	5000	ug/L	100.8	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Chromium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Cobalt	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Copper	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Iron	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Lead	51.7	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Magnesium	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Manganese	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Molybdenum	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Nickel	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Potassium	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Silver	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Sodium	5260	ug/L	5000	ug/L	105.2	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Thallium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Thorium	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Vanadium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	10−MAY−21 02:35	210509−3
	Arsenic	48.1	ug/L	50	ug/L	96.1	90.0 − 110.0	MS	10−MAY−21 11:43	210510−4
	Calcium	5000	ug/L	5000	ug/L	100.1	90.0 − 110.0	MS	10−MAY−21 11:43	210510−4
	Manganese	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	10−MAY−21 11:43	210510−4
	Selenium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	10−MAY−21 11:43	210510−4
	Sodium	5200	ug/L	5000	ug/L	104	90.0 − 110.0	MS	10−MAY−21 11:43	210510−4
	Zinc	54.8	ug/L	50	ug/L	109.6	90.0 − 110.0	MS	10−MAY−21 11:43	210510−4
CCV04										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.5	90.0 − 110.0	MS	09−MAY−21 19:38	210509−1
	Uranium−238	50.9	ug/L	49.64	ug/L	102.5	90.0 − 110.0	MS	09−MAY−21 19:38	210509−1
	Aluminum	4980	ug/L	5050	ug/L	98.5	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Antimony	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Beryllium	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Cadmium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Calcium	4950	ug/L	5000	ug/L	98.9	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Chromium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Cobalt	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Copper	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Iron	5000	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Magnesium	5000	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Manganese	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Molybdenum	48.7	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Nickel	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Potassium	5020	ug/L	5000	ug/L	100.5	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Silver	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Sodium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Thallium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Thorium	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Vanadium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	10−MAY−21 03:11	210509−3
	Arsenic	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	10−MAY−21 12:08	210510−4
	Calcium	4920	ug/L	5000	ug/L	98.4	90.0 − 110.0	MS	10−MAY−21 12:08	210510−4
	Manganese	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 12:08	210510−4
	Selenium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	10−MAY−21 12:08	210510−4
	Sodium	5050	ug/L	5000	ug/L	101	90.0 − 110.0	MS	10−MAY−21 12:08	210510−4
	Zinc	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	10−MAY−21 12:08	210510−4
CCV05										
	Aluminum	4970	ug/L	5050	ug/L	98.4	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Antimony	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Barium	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Beryllium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Cadmium	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Calcium	4930	ug/L	5000	ug/L	98.6	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Chromium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Cobalt	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Copper	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Lead	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Magnesium	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Manganese	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Molybdenum	48.4	ug/L	50	ug/L	96.7	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Nickel	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Potassium	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Silver	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Sodium	5150	ug/L	5000	ug/L	102.9	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Thallium	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Thorium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Vanadium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	10−MAY−21 03:50	210509−3
	Arsenic	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	10−MAY−21 12:32	210510−4
	Calcium	4940	ug/L	5000	ug/L	98.7	90.0 − 110.0	MS	10−MAY−21 12:32	210510−4
	Manganese	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	10−MAY−21 12:32	210510−4
	Selenium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	10−MAY−21 12:32	210510−4
	Sodium	5140	ug/L	5000	ug/L	102.9	90.0 − 110.0	MS	10−MAY−21 12:32	210510−4
	Zinc	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	10−MAY−21 12:32	210510−4
CCV06										
	Arsenic	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	10−MAY−21 12:55	210510−4
	Calcium	4810	ug/L	5000	ug/L	96.2	90.0 − 110.0	MS	10−MAY−21 12:55	210510−4
	Manganese	48.6	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	10−MAY−21 12:55	210510−4
	Selenium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	10−MAY−21 12:55	210510−4
	Sodium	5000	ug/L	5000	ug/L	100.1	90.0 − 110.0	MS	10−MAY−21 12:55	210510−4
	Zinc	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	10−MAY−21 12:55	210510−4
CCV07										
	Arsenic	48	ug/L	50	ug/L	95.9	90.0 − 110.0	MS	10−MAY−21 13:20	210510−4

METALS
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Initial and Continuing Calibration Verification

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Calcium	4840	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	10−MAY−21 13:20	210510−4
	Manganese	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	10−MAY−21 13:20	210510−4
	Selenium	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	10−MAY−21 13:20	210510−4
	Sodium	5100	ug/L	5000	ug/L	102	90.0 − 110.0	MS	10−MAY−21 13:20	210510−4
	Zinc	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	10−MAY−21 13:20	210510−4

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
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CRDL Standard for ICP & ICPMS

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0012	ug/L	.0014	ug/L	85.7	80.0 − 120.0	MS	09−MAY−21 18:36	210509−1
	Uranium−238	.203	ug/L	.2	ug/L	101.6	80.0 − 120.0	MS	09−MAY−21 18:36	210509−1
	Aluminum	51.8	ug/L	50	ug/L	103.5	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Antimony	2.89	ug/L	3	ug/L	96.4	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Barium	4.03	ug/L	4	ug/L	100.7	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Beryllium	.502	ug/L	.5	ug/L	100.4	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Cadmium	.97	ug/L	1	ug/L	97	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Calcium	243	ug/L	200	ug/L	121.5	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Chromium	9.97	ug/L	10	ug/L	99.7	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Cobalt	1.04	ug/L	1	ug/L	104.2	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Copper	2.09	ug/L	2	ug/L	104.3	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Iron	99.2	ug/L	100	ug/L	99.2	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Lead	2.1	ug/L	2	ug/L	105	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Magnesium	31.4	ug/L	30	ug/L	104.5	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Manganese	5.01	ug/L	5	ug/L	100.2	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Molybdenum	1.04	ug/L	1	ug/L	103.7	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Nickel	2.11	ug/L	2	ug/L	105.6	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Potassium	306	ug/L	300	ug/L	102.1	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Silver	1.03	ug/L	1	ug/L	102.6	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Sodium	259	ug/L	250	ug/L	103.6	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Thallium	2.06	ug/L	2	ug/L	102.8	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Thorium	2.12	ug/L	2	ug/L	105.8	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Vanadium	20.1	ug/L	20	ug/L	100.6	80.0 − 120.0	MS	10−MAY−21 01:34	210509−3
	Arsenic	4.88	ug/L	5	ug/L	97.5	80.0 − 120.0	MS	10−MAY−21 11:05	210510−4
	Calcium	217	ug/L	200	ug/L	108.7	80.0 − 120.0	MS	10−MAY−21 11:05	210510−4
	Manganese	5.03	ug/L	5	ug/L	100.7	80.0 − 120.0	MS	10−MAY−21 11:05	210510−4
	Selenium	5.02	ug/L	5	ug/L	100.3	80.0 − 120.0	MS	10−MAY−21 11:05	210510−4
	Sodium	257	ug/L	250	ug/L	102.7	80.0 − 120.0	MS	10−MAY−21 11:05	210510−4
	Zinc	20.1	ug/L	20	ug/L	100.4	80.0 − 120.0	MS	10−MAY−21 11:05	210510−4

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541038

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	09−MAY−21 18:34	210509−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	09−MAY−21 18:34	210509−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	10−MAY−21 01:30	210509−3
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	10−MAY−21 01:30	210509−3
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	10−MAY−21 01:30	210509−3
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	10−MAY−21 01:30	210509−3
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	10−MAY−21 01:30	210509−3
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	10−MAY−21 01:30	210509−3
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	10−MAY−21 11:03	210510−4
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	10−MAY−21 11:03	210510−4
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	10−MAY−21 11:03	210510−4
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	10−MAY−21 11:03	210510−4
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	10−MAY−21 11:03	210510−4
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	10−MAY−21 11:03	210510−4
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	09−MAY−21 18:43	210509−1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541038

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	09−MAY−21 18:43	210509−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	10−MAY−21 01:48	210509−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 01:48	210509−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 01:48	210509−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Molybdenum	0.784	+/−1	J	0.2	1.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 01:48	210509−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 01:48	210509−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 01:48	210509−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 11:15	210510−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 11:15	210510−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 11:15	210510−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 11:15	210510−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 11:15	210510−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 11:15	210510−4
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	09−MAY−21 19:03	210509−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	09−MAY−21 19:03	210509−1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541038

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	10−MAY−21 01:59	210509−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 01:59	210509−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 01:59	210509−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Molybdenum	0.61	+/−1	J	0.2	1.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 01:59	210509−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 01:59	210509−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Thorium	0.803	+/−2	J	0.7	2.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 01:59	210509−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 11:23	210510−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 11:23	210510−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 11:23	210510−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 11:23	210510−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 11:23	210510−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 11:23	210510−4
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	09−MAY−21 19:21	210509−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	09−MAY−21 19:21	210509−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 02:38	210509−3

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541038

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	10−MAY−21 02:38	210509−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 02:38	210509−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 02:38	210509−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 02:38	210509−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 02:38	210509−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 02:38	210509−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 11:45	210510−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 11:45	210510−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 11:45	210510−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 11:45	210510−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 11:45	210510−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 11:45	210510−4
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	09−MAY−21 19:40	210509−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	09−MAY−21 19:40	210509−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	10−MAY−21 03:14	210509−3

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541038

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	10−MAY−21 03:14	210509−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 03:14	210509−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 03:14	210509−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 03:14	210509−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 03:14	210509−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 03:14	210509−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 12:10	210510−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 12:10	210510−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 12:10	210510−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 12:10	210510−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 12:10	210510−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 12:10	210510−4
CCB05										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	10−MAY−21 03:54	210509−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 03:54	210509−3

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541038

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 03:54	210509−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	10−MAY−21 03:54	210509−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 03:54	210509−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 03:54	210509−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 03:54	210509−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 12:35	210510−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 12:35	210510−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 12:35	210510−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 12:35	210510−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 12:35	210510−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 12:35	210510−4
CCB06										
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 12:57	210510−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 12:57	210510−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 12:57	210510−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 12:57	210510−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 12:57	210510−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 12:57	210510−4
CCB07										
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 13:22	210510−4

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541038

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 13:22	210510−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	10−MAY−21 13:22	210510−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 13:22	210510−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 13:22	210510−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 13:22	210510−4

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541038

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204799665								
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.884	ug/L	+/−1	BJ	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.321	ug/L	+/−0.5	BJ	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium-235	0.0001	ug/L					09-MAY-21 18:38	210509-1
	Uranium-238	0.018	ug/L					09-MAY-21 18:38	210509-1
ICSAB01									
	Uranium-235	0.144	ug/L	.145	ug/L	99	80.0 - 120.0	09-MAY-21 18:40	210509-1
	Uranium-238	19.6	ug/L	19.86	ug/L	98.7	80.0 - 120.0	09-MAY-21 18:40	210509-1

METALS
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Interference Check Sample

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	93300	ug/L	100000	ug/L	93.3	80.0 − 120.0	10−MAY−21 01:37	210509−3
	Antimony	0.036	ug/L					10−MAY−21 01:37	210509−3
	Barium	2.58	ug/L					10−MAY−21 01:37	210509−3
	Beryllium	−0.002	ug/L					10−MAY−21 01:37	210509−3
	Cadmium	0.978	ug/L					10−MAY−21 01:37	210509−3
	Calcium	94100	ug/L	100000	ug/L	94.1	80.0 − 120.0	10−MAY−21 01:37	210509−3
	Chromium	0.835	ug/L					10−MAY−21 01:37	210509−3
	Cobalt	0.469	ug/L					10−MAY−21 01:37	210509−3
	Copper	0.165	ug/L					10−MAY−21 01:37	210509−3
	Iron	82400	ug/L	100000	ug/L	82.4	80.0 − 120.0	10−MAY−21 01:37	210509−3
	Lead	0.227	ug/L					10−MAY−21 01:37	210509−3
	Magnesium	91300	ug/L	100000	ug/L	91.3	80.0 − 120.0	10−MAY−21 01:37	210509−3
	Manganese	6.24	ug/L					10−MAY−21 01:37	210509−3
	Molybdenum	2020	ug/L	2000	ug/L	101	80.0 − 120.0	10−MAY−21 01:37	210509−3
	Nickel	0.47	ug/L					10−MAY−21 01:37	210509−3
	Potassium	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	10−MAY−21 01:37	210509−3
	Silver	0.136	ug/L					10−MAY−21 01:37	210509−3
	Sodium	98600	ug/L	100000	ug/L	98.6	80.0 − 120.0	10−MAY−21 01:37	210509−3
	Thallium	0.015	ug/L					10−MAY−21 01:37	210509−3
	Thorium	2.36	ug/L					10−MAY−21 01:37	210509−3
	Vanadium	0.081	ug/L					10−MAY−21 01:37	210509−3
ICSAB01									
	Aluminum	93700	ug/L	100000	ug/L	93.7	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Antimony	20.0	ug/L	20	ug/L	99.8	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Barium	21.3	ug/L	22.35	ug/L	95.3	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Beryllium	18.9	ug/L	20	ug/L	94.3	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Cadmium	20.0	ug/L	20.72	ug/L	96.5	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Calcium	95200	ug/L	100000	ug/L	95.2	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Chromium	20.2	ug/L	20	ug/L	101	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Cobalt	19.4	ug/L	20.65	ug/L	93.8	80.0 − 120.0	10−MAY−21 01:41	210509−3

METALS
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Interference Check Sample

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Copper	17.8	ug/L	20	ug/L	88.8	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Iron	82800	ug/L	100000	ug/L	82.8	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Lead	19.1	ug/L	20	ug/L	95.4	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Magnesium	91900	ug/L	100000	ug/L	91.9	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Manganese	25.0	ug/L	25.72	ug/L	97.2	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Molybdenum	2010	ug/L	2000	ug/L	100	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Nickel	18.9	ug/L	20	ug/L	94.6	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Potassium	94300	ug/L	100000	ug/L	94.3	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Silver	18.3	ug/L	20	ug/L	91.5	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Sodium	99300	ug/L	100000	ug/L	99.3	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Thallium	18.7	ug/L	20	ug/L	93.2	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Thorium	20.8	ug/L	20	ug/L	104	80.0 − 120.0	10−MAY−21 01:41	210509−3
	Vanadium	19.8	ug/L	20	ug/L	99.1	80.0 − 120.0	10−MAY−21 01:41	210509−3

METALS
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Interference Check Sample

SDG No: 541038

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	0.216	ug/L					10−MAY−21 11:08	210510−4
	Calcium	91700	ug/L	100000	ug/L	91.7	80.0 − 120.0	10−MAY−21 11:08	210510−4
	Manganese	5.72	ug/L					10−MAY−21 11:08	210510−4
	Selenium	0.293	ug/L					10−MAY−21 11:08	210510−4
	Sodium	93100	ug/L	100000	ug/L	93.1	80.0 − 120.0	10−MAY−21 11:08	210510−4
	Zinc	2.63	ug/L					10−MAY−21 11:08	210510−4
ICSAB01									
	Arsenic	20.4	ug/L	20	ug/L	102	80.0 − 120.0	10−MAY−21 11:10	210510−4
	Calcium	94600	ug/L	100000	ug/L	94.6	80.0 − 120.0	10−MAY−21 11:10	210510−4
	Manganese	25.5	ug/L	25.72	ug/L	98.9	80.0 − 120.0	10−MAY−21 11:10	210510−4
	Selenium	20.4	ug/L	20	ug/L	102	80.0 − 120.0	10−MAY−21 11:10	210510−4
	Sodium	96300	ug/L	100000	ug/L	96.3	80.0 − 120.0	10−MAY−21 11:10	210510−4
	Zinc	22.0	ug/L	20	ug/L	110	80.0 − 120.0	10−MAY−21 11:10	210510−4

METALS
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Matrix Spike Summary

SDG NO. 541038 **Client ID** HA20−CMT−3D2−04122021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541038001 **Spike ID:** 1204799667

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Zinc	ug/L	75−125	45.9		5.47	J	50.0	80.9		MS
Vanadium	ug/L	75−125	51.8		3.30	U	50.0	101		MS
Aluminum	ug/L	75−125	2030		41.8	J	2000	99.6		MS
Antimony	ug/L	75−125	50.1		1.00	U	50.0	99.1		MS
Arsenic	ug/L	75−125	58.4		8.30		50.0	100		MS
Barium	ug/L	75−125	89.6		42.3		50.0	94.6		MS
Beryllium	ug/L	75−125	53.4		0.200	U	50.0	107		MS
Cadmium	ug/L	75−125	48.3		0.300	U	50.0	96.2		MS
Calcium	ug/L		58400		58400		2000	1.79	N/A	MS
Chromium	ug/L	75−125	48.5		3.00	U	50.0	96.4		MS
Cobalt	ug/L	75−125	48.5		1.23		50.0	94.5		MS
Copper	ug/L	75−125	44.0		0.976	J	50.0	86		MS
Iron	ug/L	75−125	2880		999		2000	93.9		MS
Lead	ug/L	75−125	47.8		0.500	U	50.0	94.7		MS
Magnesium	ug/L		10200		8090		2000	105	N/A	MS
Manganese	ug/L		2290		2280		50.0	15.4	N/A	MS
Molybdenum	ug/L		345		293		50.0	103	N/A	MS
Nickel	ug/L	75−125	46.5		1.04	J	50.0	90.9		MS
Potassium	ug/L	75−125	8320		6280		2000	102		MS
Selenium	ug/L	75−125	54.8		2.00	U	50.0	109		MS
Silver	ug/L	75−125	46.7		0.300	U	50.0	93.4		MS
Sodium	ug/L		416000		424000		2000	−410	N/A	MS

METALS
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Matrix Spike Summary

SDG NO.	541038	**Client ID**	HA20−CMT−3D2−04122021S
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	541038001	**Spike ID:**	1204799667

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Thallium	ug/L	75−125	47.5		0.600	U	50.0	94.9		MS
Thorium	ug/L	75−125	50.1		0.720	J	50.0	98.8		MS
Uranium−235	ug/L	75−125	0.942		0.580		0.360	101		MS
Uranium−238	ug/L	75−125	123		79.0		49.6	88.6		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541038 **Client ID** HA20−CMT−3D2−04122021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541038001 **Spike ID:** 1204799668

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−238	ug/L	75−125	122		79.0		49.6	85.8		MS
Vanadium	ug/L	75−125	51.3		3.30	U	50.0	99.6		MS
Zinc	ug/L	75−125	46.7		5.47	J	50.0	82.5		MS
Aluminum	ug/L	75−125	1980		41.8	J	2000	97.1		MS
Antimony	ug/L	75−125	49.6		1.00	U	50.0	98		MS
Arsenic	ug/L	75−125	58.4		8.30		50.0	100		MS
Barium	ug/L	75−125	88.3		42.3		50.0	92		MS
Beryllium	ug/L	75−125	52.3		0.200	U	50.0	105		MS
Cadmium	ug/L	75−125	46.7		0.300	U	50.0	93.2		MS
Calcium	ug/L		58200		58400		2000	−10.5	N/A	MS
Chromium	ug/L	75−125	48.1		3.00	U	50.0	95.6		MS
Cobalt	ug/L	75−125	47.9		1.23		50.0	93.3		MS
Copper	ug/L	75−125	44.0		0.976	J	50.0	86.1		MS
Iron	ug/L	75−125	2840		999		2000	91.8		MS
Lead	ug/L	75−125	47.0		0.500	U	50.0	93.1		MS
Magnesium	ug/L		9900		8090		2000	90.5	N/A	MS
Manganese	ug/L		2250		2280		50.0	−54.6	N/A	MS
Molybdenum	ug/L		338		293		50.0	89.5	N/A	MS
Nickel	ug/L	75−125	45.4		1.04	J	50.0	88.8		MS
Potassium	ug/L	75−125	8270		6280		2000	99.3		MS
Selenium	ug/L	75−125	54.4		2.00	U	50.0	108		MS
Silver	ug/L	75−125	45.5		0.300	U	50.0	90.9		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO.	541038	**Client ID**	HA20−CMT−3D2−04122021SD
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	541038001	**Spike ID:**	1204799668

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Sodium	ug/L		409000		424000		2000	−762	N/A	MS
Thallium	ug/L	75−125	46.3		0.600	U	50.0	92.5		MS
Thorium	ug/L	75−125	48.4		0.720	J	50.0	95.3		MS
Uranium−235	ug/L	75−125	0.934		0.580		0.360	98.3		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 541038 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA20−CMT−3D2−04122021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799667 **Duplicate ID:** 1204799668 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2030		1980		2.55		MS
Antimony	ug/L	+/−20	50.1		49.6		1.06		MS
Arsenic	ug/L	+/−20	58.4		58.4		.14		MS
Barium	ug/L	+/−20	89.6		88.3		1.44		MS
Beryllium	ug/L	+/−20	53.4		52.3		2.02		MS
Cadmium	ug/L	+/−20	48.3		46.7		3.19		MS
Calcium	ug/L	+/−20	58400		58200		.422		MS
Chromium	ug/L	+/−20	48.5		48.1		.811		MS
Cobalt	ug/L	+/−20	48.5		47.9		1.2		MS
Copper	ug/L	+/−20	44.0		44.0		.134		MS
Iron	ug/L	+/−20	2880		2840		1.46		MS
Lead	ug/L	+/−20	47.8		47.0		1.7		MS
Magnesium	ug/L	+/−20	10200		9900		2.9		MS
Manganese	ug/L	+/−20	2290		2250		1.54		MS
Molybdenum	ug/L	+/−20	345		338		2.03		MS
Nickel	ug/L	+/−20	46.5		45.4		2.35		MS
Potassium	ug/L	+/−20	8320		8270		.675		MS
Selenium	ug/L	+/−20	54.8		54.4		.664		MS
Silver	ug/L	+/−20	46.7		45.5		2.74		MS
Sodium	ug/L	+/−20	416000		409000		1.71		MS
Thallium	ug/L	+/−20	47.5		46.3		2.51		MS
Thorium	ug/L	+/−20	50.1		48.4		3.49		MS
Uranium−235	ug/L	+/−20	0.942		0.934		.874		MS
Uranium−238	ug/L	+/−20	123		122		1.16		MS
Vanadium	ug/L	+/−20	51.8		51.3		.991		MS
Zinc	ug/L	+/−20	45.9		46.7		1.74		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 541038 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA20−CMT−3D2−04122021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799667 **Duplicate ID:** 1204799668 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 541038

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799666								
	Aluminum	ug/L	2000	1990		99.4	80−120	MS
	Antimony	ug/L	50.0	47.4		94.7	80−120	MS
	Arsenic	ug/L	50.0	46.6		93.3	80−120	MS
	Barium	ug/L	50.0	48.2		96.3	80−120	MS
	Beryllium	ug/L	50.0	54.2		108	80−120	MS
	Cadmium	ug/L	50.0	48.2		96.4	80−120	MS
	Calcium	ug/L	2000	2120		106	80−120	MS
	Chromium	ug/L	50.0	48.6		97.2	80−120	MS
	Cobalt	ug/L	50.0	48.5		96.9	80−120	MS
	Copper	ug/L	50.0	49.2		98.5	80−120	MS
	Iron	ug/L	2000	1940		97.2	80−120	MS
	Lead	ug/L	50.0	50.0		99.9	80−120	MS
	Magnesium	ug/L	2000	2020		101	80−120	MS
	Manganese	ug/L	50.0	49.5		99	80−120	MS
	Molybdenum	ug/L	50.0	49.1		98.2	80−120	MS
	Nickel	ug/L	50.0	49.3		98.6	80−120	MS
	Potassium	ug/L	2000	2000		99.9	80−120	MS
	Selenium	ug/L	50.0	47.9		95.9	80−120	MS
	Silver	ug/L	50.0	50.1		100	80−120	MS
	Sodium	ug/L	2000	2140		107	80−120	MS
	Thallium	ug/L	50.0	49.4		98.8	80−120	MS
	Thorium	ug/L	50.0	48.8		97.6	80−120	MS
	Uranium−235	ug/L	0.360	0.357		99.2	80−120	MS
	Uranium−238	ug/L	49.6	48.9		98.4	80−120	MS
	Vanadium	ug/L	50.0	49.3		98.7	80−120	MS
	Zinc	ug/L	50.0	48.2		96.5	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541038 **Client ID** HA20−CMT−3D2−04122021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541038001 **Serial Dilution ID:** 1204799669

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	41.8	J	96.5	U	1.074			MS
Antimony	1	U	5	U				MS
Arsenic	8.3		10	U	6.303			MS
Barium	42.3		41.9		1.077			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	5840		5450		6.618		20	MS
Chromium	3	U	15	U				MS
Cobalt	1.23		1.5	U	9.935			MS
Copper	.976	J	1.5	U	10.656			MS
Iron	999		1020		2.596			MS
Lead	.5	U	2.5	U				MS
Magnesium	8090		8040		.642		20	MS
Manganese	228		214		5.983		20	MS
Molybdenum	293		264		9.837		20	MS
Nickel	1.04	J	3	U	7.006			MS
Potassium	6280		6140		2.282			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	42400		39500		6.842		20	MS
Thallium	.6	U	3	U				MS
Thorium	.72	J	3.5	U	2.083			MS
Uranium−235	.58		.561		3.379			MS
Uranium−238	79		77.4		2.059		20	MS
Vanadium	3.3	U	16.5	U				MS
Zinc	5.47	J	16.5	U	192.962			MS

SW846

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541038 **Client ID:** HA20−CMT−3D2−04122021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541038001 **Serial Dilution ID:** 1204799669

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 541038 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2117219							
1204799665	MB for batch 2117219	MB	G	20−APR−21	50mL	50mL	
1204799666	LCS for batch 2117219	LCS	G	20−APR−21	50mL	50mL	
1204799667	HA20−CMT−3D2−04122021S	MS	G	20−APR−21	50mL	50mL	
1204799668	HA20−CMT−3D2−04122021SD	MSD	G	20−APR−21	50mL	50mL	
541038001	HA20−CMT−3D2−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038002	HA20−CMT−3D2−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038003	MW−BS37−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038004	MW−BS37−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038005	EQ Blank1−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038006	EQ Blank1−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038007	MW−SD64−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038008	MW−SD64−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038009	MW−SD10−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038010	MW−SD10−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038011	MW−SD10−04122021DUP	SAMPLE	G	20−APR−21	50mL	50mL	
541038012	MW−SD10−04122021DUP	SAMPLE	G	20−APR−21	50mL	50mL	
541038013	P−4−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038014	P−4−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038015	HA20−CMT−4I−04122021	SAMPLE	G	20−APR−21	50mL	50mL	

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 541038 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
541038016	HA20−CMT−4I−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038017	MW−S03−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038018	MW−S03−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038019	MW−S26−04122021	SAMPLE	G	20−APR−21	50mL	50mL	
541038020	MW−S26−04122021	SAMPLE	G	20−APR−21	50mL	50mL	

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541038

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 09-MAY-21

End Date: 10-MAY-21

Data File: 210509-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	18:27:43																							X	X		
S10	1	18:29:29																							X	X		
S100	1	18:31:16																							X	X		
ICV01	1	18:33:03																							X	X		
ICB01	1	18:34:51																							X	X		
CRDL01	1	18:36:38																							X	X		
ICSA01	1	18:38:27																							X	X		
ICSAB01	1	18:40:15																							X	X		
CCV01	1	18:42:03																							X	X		
CCB01	1	18:43:50																							X	X		
1204799665	1	18:45:36																							X	X		
1204799666	1	18:47:23																							X	X		
541038001	1	18:49:10																							X	X		
1204799667	1	18:50:56																							X	X		
1204799668	1	18:52:42																							X	X		
ZZZZZZ	1	18:54:29																										
1204799669	5	18:56:15																							X	X		
541038002	1	18:58:02																							X	X		
541038003	1	18:59:48																							X	X		
CCV02	1	19:01:36																							X	X		
CCB02	1	19:03:23																							X	X		
541038004	1	19:05:10																							X	X		
541038005	1	19:06:57																							X	X		
541038006	1	19:08:44																							X	X		
541038007	1	19:10:31																							X	X		
541038008	1	19:12:17																							X	X		
541038009	1	19:14:04																							X	X		
541038010	1	19:15:51																							X	X		
541038011	1	19:17:37																							X	X		
CCV03	1	19:19:24																							X	X		
CCB03	1	19:21:12																							X	X		
541038012	1	19:22:59																							X	X		
541038013	1	19:24:45																							X	X		
541038014	1	19:26:31																							X	X		
541038015	1	19:28:18																							X	X		
541038016	1	19:30:05																							X	X		
541038017	1	19:31:52																							X	X		
541038018	1	19:33:38																							X	X		
541038019	1	19:35:25																							X	X		
541038020	1	19:37:11																							X	X		
CCV04	1	19:38:58																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541038

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB04	1	19:40:46																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541038

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 09-MAY-21

End Date: 10-MAY-21

Data File: 210509-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	01:15:59	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
S10	1	01:19:37	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
S100	1	01:23:13	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
ICV01	1	01:26:50	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
ICB01	1	01:30:26	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CRDL01	1	01:34:03	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
ICSA01	1	01:37:40	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
ICSAB01	1	01:41:16	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CCV01	1	01:44:53	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CCB01	1	01:48:30	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
LR01	1	01:52:07	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CCV02	1	01:55:44	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CCB02	1	01:59:21	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
1204799665	1	02:02:57	X	X		X	X	X		X	X	X	X	X	X		X	X	X		X		X	X			X	
1204799666	1	02:06:33	X	X		X	X	X		X	X	X	X	X	X		X	X	X		X		X	X			X	
541038001	1	02:10:09	X	X		X	X	X		X	X	X	X	X	X		X	X	X		X		X	X			X	
1204799667	1	02:13:45	X	X		X	X	X		X	X	X	X	X	X		X	X	X		X		X	X			X	
1204799668	1	02:17:21	X	X		X	X	X		X	X	X	X	X	X		X	X	X		X		X	X			X	
ZZZZZZ	1	02:20:56																										
1204799669	5	02:24:32	X	X		X	X	X		X	X	X	X	X	X		X	X	X		X		X	X			X	
541038002	1	02:28:08	X	X		X	X	X		X	X	X	X	X	X		X	X	X		X		X	X			X	
541038003	1	02:31:44	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CCV03	1	02:35:20	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CCB03	1	02:38:56	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038004	1	02:42:32	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038005	1	02:46:08	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038006	1	02:49:44	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038007	1	02:53:20	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038008	1	02:56:56	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038009	1	03:00:32	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038010	1	03:04:07	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038011	1	03:07:43	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CCV04	1	03:11:19	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CCB04	1	03:14:56	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038012	1	03:18:32	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038013	1	03:22:08	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038014	1	03:25:43	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038015	1	03:29:19	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X			X	
541038016	1	03:32:55	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X			X	
541038017	1	03:36:31	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
541038018	1	03:40:07	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541038

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 09-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210509-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541038019	1	03:43:43	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X			X	
541038020	1	03:47:18	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X			X	
CCV05	1	03:50:55	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	
CCB05	1	03:54:32	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541038

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210510-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	10:53:27			X				X							X				X		X						X
S10	1	10:55:56			X				X							X				X		X						X
S100	1	10:58:25			X				X							X				X		X						X
ICV01	1	11:00:54			X				X							X				X		X						X
ICB01	1	11:03:23			X				X							X				X		X						X
CRDL01	1	11:05:53			X				X							X				X		X						X
ICSA01	1	11:08:22			X				X							X				X		X						X
ICSAB01	1	11:10:51			X				X							X				X		X						X
CCV01	1	11:13:20			X				X							X				X		X						X
CCB01	1	11:15:48			X				X							X				X		X						X
LR01	1	11:18:17			X				X							X				X		X						X
CCV02	1	11:20:46			X				X							X				X		X						X
CCB02	1	11:23:15			X				X							X				X		X						X
1204799665	1	11:25:45			X				X							X				X		X						X
1204799666	1	11:28:14			X				X							X				X		X						X
541038001	1	11:30:43			X															X								X
1204799667	1	11:33:12			X															X								X
1204799668	1	11:35:41			X															X								X
ZZZZZZ	1	11:38:10																										
1204799669	5	11:40:39			X															X								X
CCV03	1	11:43:09			X				X							X				X		X						X
CCB03	1	11:45:38			X				X							X				X		X						X
541038001	10	11:48:07							X							X						X						
1204799667	10	11:50:36							X							X						X						
1204799668	10	11:53:05							X							X						X						
1204799669	50	11:55:33							X							X						X						
541038002	1	11:58:02			X															X								X
541038002	10	12:00:31							X							X						X						
541038003	1	12:03:00			X															X								X
541038003	10	12:05:29							X																			
CCV04	1	12:08:00			X				X							X				X		X						X
CCB04	1	12:10:30			X				X							X				X		X						X
541038004	1	12:13:00			X															X								X
541038005	1	12:15:29			X															X								X
541038006	1	12:17:58			X															X								X
541038007	1	12:20:28			X															X								X
541038008	1	12:22:57			X															X								X
541038009	1	12:25:26			X															X								X
541038010	1	12:27:55			X															X								X
541038011	1	12:30:24			X															X								X
CCV05	1	12:32:54			X				X							X				X		X						X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541038

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 10-MAY-21 **Data File:** 210510-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB05	1	12:35:24			X				X							X				X		X						X
541038012	1	12:37:54			X															X								X
541038013	1	12:40:24			X															X								X
541038014	1	12:42:53			X															X								X
541038015	1	12:45:22			X															X								X
541038015	10	12:47:51																				X						
541038016	1	12:50:21			X															X								X
541038016	10	12:52:51																				X						
CCV06	1	12:55:21			X				X							X				X		X						X
CCB06	1	12:57:51			X				X							X				X		X						X
541038017	1	13:00:21			X															X								X
ZZZZZZ	2	13:02:51																										
541038018	1	13:05:20			X															X								X
ZZZZZZ	2	13:07:50																										
541038019	1	13:10:20			X															X								X
541038019	10	13:12:49																				X						
541038020	1	13:15:19			X															X								X
541038020	10	13:17:49																				X						
CCV07	1	13:20:20			X				X							X				X		X						X
CCB07	1	13:22:49			X				X							X				X		X						X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 541038

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 541038

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117219**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799666	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799666	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799667	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799667	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799668	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799668	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	**Prep Date**	**Matrix**	**Initial Volume (mL)**	**Hot Block Stop Date (date)**	**Final Volume (mL)**	**Prep Factor (mL/mL)**	**pH Check**
1204799665 MB	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799666 LCS	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038001	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799669 SDILT (541038001)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799667 MS (541038001)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799668 MSD (541038001)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038002	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038003	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038004	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038005	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038006	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038007	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038008	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038009	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038010	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038011	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038012	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038013	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038014	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038015	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038016	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038017	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038018	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038019	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541038020	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2

Reagent/Solvent Lot ID	**Description**	**Amount**
3267483	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 90 C
Temperature within limits (Y/N)?: y
Thermometer ID: 1120212072
Hot Block ID: 11
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 13, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541198

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 17, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04142021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541198

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541198

May 13, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 17, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541198001	HA20-CMT-512-04142021
541198002	HA20-CMT-512-04142021
541198003	MW-SD30-04142021
541198004	MW-SD30-04142021
541198005	MW-SD06-04142021
541198006	MW-SD06-04142021
541198007	P-1-04142021
541198008	P-1-04142021
541198009	MW-SM13-04142021
541198010	MW-SM13-04142021
541198011	MW-S11-04142021
541198012	MW-S11-04142021
541198013	BEW-3-04142021
541198014	BEW-3-04142021
541198015	P-2-04142021
541198016	P-2-04142021
541198017	MW-SD27-04142021
541198018	MW-SD27-04142021
541198019	HA20-CMT-6S-04142021
541198020	HA20-CMT-6S-04142021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page: 1 of 3
Project # 3252H
GEL Quote #: GELP18-1125
COC Number (1): 04142021
PO Number:

GEL Laboratories LLC — Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics — gel.com

Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541198

GEL Work Order Number: *GEL Project Manager: Zach Worsham*

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) (NI)	Dissolved Metals (6020A ICP-MS) (NI)	U-235/U-238 plus Total U Calc. (NI)	Comments
HA20-CMT-512-04142021	4/14/2021	8:50	N	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
MW-SD30-04142021	4/14/2021	9:05	N	Y	GW	U238		2	X	X	X	
MW-SD06-04142021	4/14/2021	9:10	N	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
P-1-04142021	4/14/2021	9:15	N	Y	GW	U238		2	X	X	X	
MW-SM13-04142021	4/14/2021	9:50	N	Y	GW	U238		2	X	X	X	
MW-S11-04142021	4/14/2021	10:20	N	Y	GW	U238		2	X	X	X	
BEW-3-04142021	4/14/2021	10:30	N/MS/MSD	Y	GW	U238		2	X	X	X	
P-2-04142021	4/14/2021	11:10	N	Y	GW	U238		2	X	X	X	U-235/U-238 plus Total U Calc. for Total and Dissolved
MW-SD27-04142021	4/14/2021	11:15	N	Y	GW	U238		2	X	X	X	
HA20-CMT-6S-04142021	4/14/2021	11:20	N	Y	GW	U238		2	X	X	X	

<-- Preservative Type (6)

Comments: Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/16/2021	0800	1	[signature]	4/16/21	0800
2	[signature]	4/16/21	1530	2	[signature]	4/17/21	920
3				3			

TAT Requested: Normal: X Rush: _____ Specify: _______

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: Custody Seal Intact? [ ] *Yes* [ ] *No* *Cooter Temp:* _____°C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via NaI [illegible]

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541198
Received By: Stacy Boone	Date Received: April 17, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 6884 6500 3°c 7734 6884 6451 4°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:_______
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?			✓	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) SEE ATTACHED
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7734 6884 6716 3°c 7734 6884 5948 2°c

7734 6884 6201 3°c 7734 6884 6407 4°c

PM (or PMA) review: Initials MB Date 4/19/21 Page 1 of 2

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC SAMPLE RECEIPT & REVIEW CONTINUATION FORM

Client: DMAX Received By: SB Date Received: 4/17/21 SDG/AR/COC/Work Order: 541198

ID:	COC TIME:	SAMPLE TIME:
HB-10-04142021	14:30	16:05
HBPZ-2R-04142021	14:05	14:30
HA20 - CMT - 61 -04142021	14:00	14:05
~~GW~~		
GZW-11-2-04152021	13:05	16:05

PM (or PMA) review: Initials MB Date 4/19/21 Page 2 of 2

Work Order Containers

Sample ID: **541198001**
Client Sample ID: **HA20−CMT−512−04142021**
Description: **Ground Water**

Label: 541198001.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541198001.01.01	**Type: New Undefined**	
10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198002**
Client Sample ID: **HA20−CMT−512−04142021**
Description: **Dissolved Ground Water**

Label: 541198002.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541198002.01.01	**Type: New Undefined**	
10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198003**
Client Sample ID: **MW−SD30−04142021**
Description: **Ground Water**

Label: 541198003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to

Work Order Containers

Sample ID: **541198003**
Client Sample ID: **MW−SD30−04142021**
Description: **Ground Water**

Label: 541198003.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541198003.01.01	Type: New Undefined	
10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198004**
Client Sample ID: **MW−SD30−04142021**
Description: **Dissolved Ground Water**

Label: 541198004.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541198004.01.01	Type: New Undefined	
10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198005**
Client Sample ID: **MW−SD06−04142021**
Description: **Ground Water**

Label: 541198005.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Work Order Containers

Sample ID: **541198005**
Client Sample ID: **MW−SD06−04142021**
Description: **Ground Water**

Label: 541198005.01.01	**Type: New Undefined**	
10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198006**
Client Sample ID: **MW−SD06−04142021**
Description: **Dissolved Ground Water**

Label: 541198006.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541198006.01.01	**Type: New Undefined**	
10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198007**
Client Sample ID: **P−1−04142021**
Description: **Ground Water**

Label: 541198007.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541198007.01.01	**Type: New Undefined**	
10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541198008**
Client Sample ID: **P−1−04142021**
Description: **Dissolved Ground Water**

Label: 541198008.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541198008.01.01 **Type: New Undefined**

10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198009**
Client Sample ID: **MW−SM13−04142021**
Description: **Ground Water**

Label: 541198009.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541198009.01.01 **Type: New Undefined**

10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198010**
Client Sample ID: **MW−SM13−04142021**
Description: **Dissolved Ground Water**

Label: 541198010.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to

Work Order Containers

Sample ID: **541198010**
Client Sample ID: **MW−SM13−04142021**
Description: **Dissolved Ground Water**

Label: 541198010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541198010.01.01	**Type: New Undefined**	
12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198011**
Client Sample ID: **MW−S11−04142021**
Description: **Ground Water**

Label: 541198011.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541198011.01.01	**Type: New Undefined**	
12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198012**
Client Sample ID: **MW−S11−04142021**
Description: **Dissolved Ground Water**

Label: 541198012.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:34	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541198012**
Client Sample ID: **MW−S11−04142021**
Description: **Dissolved Ground Water**

Label: 541198012.01.01	**Type: New Undefined**	
12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198013**
Client Sample ID: **BEW−3−04142021**
Description: **Ground Water**

Label: 541198013.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:35	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:05:53	Hannah Hatherly	Transfered custody to batch 2117224
21−APR−21 19:05:53	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2117224 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)
Label: 541198013.01.01	**Type: New Undefined**	
10−MAY−21 19:01:13	Paul Boyd	Transfered custody to batch 2117226
10−MAY−21 19:01:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198014**
Client Sample ID: **BEW−3−04142021**
Description: **Dissolved Ground Water**

Label: 541198014.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:35	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541198014.01.01	**Type: New Undefined**	
12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541198015**
Client Sample ID: **P−2−04142021**
Description: **Ground Water**

Label: 541198015.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:10:35	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541198015.01.01	Type: New Undefined	
12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198016**
Client Sample ID: **P−2−04142021**
Description: **Dissolved Ground Water**

Label: 541198016.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:10:35	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541198016.01.01	Type: New Undefined	
12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198017**
Client Sample ID: **MW−SD27−04142021**
Description: **Ground Water**

Label: 541198017.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:10:35	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to

Work Order Containers

Sample ID: **541198017**
Client Sample ID: **MW−SD27−04142021**
Description: **Ground Water**

Label: 541198017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541198017.01.01	**Type: New Undefined**	
12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198018**
Client Sample ID: **MW−SD27−04142021**
Description: **Dissolved Ground Water**

Label: 541198018.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:35	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541198018.01.01	**Type: New Undefined**	
12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198019**
Client Sample ID: **HA20−CMT−6S−04142021**
Description: **Ground Water**

Label: 541198019.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:10:35	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541198019**
Client Sample ID: **HA20−CMT−6S−04142021**
Description: **Ground Water**

Label: 541198019.01.01 **Type: New Undefined**

12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541198020**
Client Sample ID: **HA20−CMT−6S−04142021**
Description: **Dissolved Ground Water**

Label: 541198020.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:10:35	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:50:46	Hannah Hatherly	Transfered custody to batch 2117227
22−APR−21 18:50:46	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117227 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541198020.01.01 **Type: New Undefined**

12−MAY−21 16:28:08	Paul Boyd	Transfered custody to batch 2117228
12−MAY−21 16:28:08	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 13 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541198

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batches:</u> 2117226 and 2117228

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2128054

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batches:</u> 2117224 and 2117227

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541198001	HA20-CMT-512-04142021
541198002	HA20-CMT-512-04142021
541198003	MW-SD30-04142021
541198004	MW-SD30-04142021
541198005	MW-SD06-04142021
541198006	MW-SD06-04142021
541198007	P-1-04142021
541198008	P-1-04142021
541198009	MW-SM13-04142021
541198010	MW-SM13-04142021
541198011	MW-S11-04142021
541198012	MW-S11-04142021
541198013	BEW-3-04142021
541198014	BEW-3-04142021
541198015	P-2-04142021
541198016	P-2-04142021
541198017	MW-SD27-04142021
541198018	MW-SD27-04142021
541198019	HA20-CMT-6S-04142021
541198020	HA20-CMT-6S-04142021
1204799681	Method Blank (MB)**ICP-MS**
1204799686	Method Blank (MB)**ICP-MS**
1204799682	Laboratory Control Sample (LCS)
1204799687	Laboratory Control Sample (LCS)
1204799685	541198013(BEW-3-04142021L) Serial Dilution (SD)
1204799690	541198014(BEW-3-04142021L) Serial Dilution (SD)
1204799683	541198013(BEW-3-04142021S) Matrix Spike (MS)
1204799688	541198014(BEW-3-04142021S) Matrix Spike (MS)

1204799684	541198013(BEW-3-04142021SD) Matrix Spike Duplicate (MSD)
1204799689	541198014(BEW-3-04142021SD) Matrix Spike Duplicate (MSD)

Samples 541198001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements

The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. ICP-MS.

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541198013 (BEW-3-04142021) and 541198014 (BEW-3-04142021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541198	
	013	**014**
Calcium	10X	10X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541198 GEL Work Order: 541198

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

** Indicates analyte is a surrogate compound.

J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

U Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Jamie Johnson**

Date: 14 MAY 2021 **Title: Group Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198001 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: HA20−CMT−512−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7440−39−3	Barium	30.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:44	210512−4	2117226
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7440−70−2	Calcium	27300	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7440−48−4	Cobalt	0.913	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7439−95−4	Magnesium	6970	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7439−96−5	Manganese	69.9	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7439−98−7	Molybdenum	1.34	ug/L		0.200	1.00	1.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7440−02−0	Nickel	1.53	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7440−09−7	Potassium	4150	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7440−23−5	Sodium	28900	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 21:57	210511−3	2117226
7440−61−1	Total Uranium	0.610	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:29	210510−1	2117226
7440−61−1	Uranium−238	0.610	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:29	210510−1	2117226
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:46	210510−2	2117226
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:46	210510−2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198002 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: HA20−CMT−512−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7440−39−3	Barium	31.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:46	210512−4	2117226
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7440−70−2	Calcium	28500	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7440−48−4	Cobalt	0.931	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7440−50−8	Copper	0.439	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7439−95−4	Magnesium	7240	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7439−96−5	Manganese	74.0	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7439−98−7	Molybdenum	1.31	ug/L		0.200	1.00	1.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7440−02−0	Nickel	1.88	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7440−09−7	Potassium	4160	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7440−23−5	Sodium	30100	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 22:00	210511−3	2117226
7440−61−1	Total Uranium	0.385	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:31	210510−1	2117226
7440−61−1	Uranium−238	0.385	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:31	210510−1	2117226
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:49	210510−2	2117226
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:49	210510−2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198003 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: MW-SD30-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	27.2	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7440-39-3	Barium	22.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:47	210512-4	2117226
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7440-70-2	Calcium	22000	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7439-89-6	Iron	41.7	ug/L	J	33.0	100	100	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7439-95-4	Magnesium	5750	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7439-96-5	Manganese	1.86	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7440-02-0	Nickel	7.33	ug/L		0.600	2.00	2.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7440-09-7	Potassium	3320	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7440-23-5	Sodium	29700	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 22:04	210511-3	2117226
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:32	210510-1	2117226
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:32	210510-1	2117226
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:53	210510-2	2117226
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:53	210510-2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198004 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: MW−SD30−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7440−39−3	Barium	22.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:49	210512−4	2117226
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7440−70−2	Calcium	22300	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7440−50−8	Copper	0.538	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7439−89−6	Iron	34.2	ug/L	J	33.0	100	100	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7439−95−4	Magnesium	5740	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7439−96−5	Manganese	1.24	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7439−98−7	Molybdenum	0.207	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7440−02−0	Nickel	7.74	ug/L		0.600	2.00	2.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7440−09−7	Potassium	3380	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7440−23−5	Sodium	30100	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 22:07	210511−3	2117226
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:34	210510−1	2117226
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:34	210510−1	2117226
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:57	210510−2	2117226
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:57	210510−2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198005 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: MW−SD06−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	70.2	ug/L		19.3	50.0	50.0	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7440−39−3	Barium	40.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:51	210512−4	2117226
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7440−70−2	Calcium	31200	ug/L		80.0	200	200	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7440−48−4	Cobalt	1.13	ug/L		0.300	1.00	1.00	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7440−50−8	Copper	5.92	ug/L		0.300	2.00	2.00	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7439−89−6	Iron	126	ug/L		33.0	100	100	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7439−92−1	Lead	0.502	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7439−95−4	Magnesium	9960	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7439−96−5	Manganese	3.58	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7439−98−7	Molybdenum	0.582	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7440−02−0	Nickel	2.65	ug/L		0.600	2.00	2.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7440−09−7	Potassium	4420	ug/L		80.0	300	300	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7440−23−5	Sodium	24000	ug/L		80.0	250	250	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 22:11	210511−3	2117226
7440−61−1	Total Uranium	1.09	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:36	210510−1	2117226
7440−61−1	Uranium−238	1.09	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:36	210510−1	2117226
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 01:00	210510−2	2117226
7440−66−6	Zinc	4.64	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 01:00	210510−2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198006 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: MW−SD06−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7440−39−3	Barium	38.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:53	210512−4	2117226
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7440−70−2	Calcium	30700	ug/L		80.0	200	200	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7440−48−4	Cobalt	1.02	ug/L		0.300	1.00	1.00	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7440−50−8	Copper	3.30	ug/L		0.300	2.00	2.00	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7439−95−4	Magnesium	9990	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7439−96−5	Manganese	1.10	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7439−98−7	Molybdenum	0.663	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7440−02−0	Nickel	2.51	ug/L		0.600	2.00	2.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7440−09−7	Potassium	4430	ug/L		80.0	300	300	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7440−23−5	Sodium	24400	ug/L		80.0	250	250	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 22:15	210511−3	2117226
7440−61−1	Total Uranium	0.885	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:38	210510−1	2117226
7440−61−1	Uranium−238	0.885	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:38	210510−1	2117226
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 01:04	210510−2	2117226
7440−66−6	Zinc	3.59	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 01:04	210510−2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198007 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: P-1-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7440-39-3	Barium	14.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:04	210512-4	2117226
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7440-70-2	Calcium	26500	ug/L		80.0	200	200	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7440-50-8	Copper	0.314	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7439-95-4	Magnesium	7360	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7439-96-5	Manganese	4.38	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7439-98-7	Molybdenum	0.270	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7440-09-7	Potassium	3200	ug/L		80.0	300	300	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7440-23-5	Sodium	16800	ug/L		80.0	250	250	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 22:18	210511-3	2117226
7440-61-1	Total Uranium	0.0931	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:43	210510-1	2117226
7440-61-1	Uranium-238	0.0931	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:43	210510-1	2117226
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 01:15	210510-2	2117226
7440-66-6	Zinc	97.0	ug/L		3.30	20.0	20.0	1	MS	PRB	05/11/21 01:15	210510-2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198008 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: P-1-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7440-39-3	Barium	14.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:05	210512-4	2117226
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7440-70-2	Calcium	26900	ug/L		80.0	200	200	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7439-95-4	Magnesium	7340	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7439-96-5	Manganese	3.91	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7439-98-7	Molybdenum	0.282	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7440-09-7	Potassium	3230	ug/L		80.0	300	300	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7440-23-5	Sodium	17100	ug/L		80.0	250	250	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 22:22	210511-3	2117226
7440-61-1	Total Uranium	0.0806	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:45	210510-1	2117226
7440-61-1	Uranium-238	0.0806	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:45	210510-1	2117226
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 01:18	210510-2	2117226
7440-66-6	Zinc	97.7	ug/L		3.30	20.0	20.0	1	MS	PRB	05/11/21 01:18	210510-2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198009 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: MW−SM13−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	51.5	ug/L		19.3	50.0	50.0	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7440−39−3	Barium	11.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:07	210512−4	2117226
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7440−70−2	Calcium	12800	ug/L		80.0	200	200	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7440−48−4	Cobalt	34.2	ug/L		0.300	1.00	1.00	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7440−50−8	Copper	2.97	ug/L		0.300	2.00	2.00	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7439−89−6	Iron	117	ug/L		33.0	100	100	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7439−95−4	Magnesium	2040	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7439−96−5	Manganese	16.0	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7440−02−0	Nickel	8.26	ug/L		0.600	2.00	2.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7440−09−7	Potassium	2410	ug/L		80.0	300	300	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7440−23−5	Sodium	35000	ug/L		80.0	250	250	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 22:33	210511−3	2117226
7440−61−1	Total Uranium	0.158	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:47	210510−1	2117226
7440−61−1	Uranium−238	0.158	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:47	210510−1	2117226
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 01:22	210510−2	2117226
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 01:22	210510−2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198010 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: MW-SM13-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-39-3	Barium	10.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-70-2	Calcium	14000	ug/L		80.0	200	200	1	MS	PRB	05/13/21 16:23	210513-11	2117228
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-48-4	Cobalt	35.4	ug/L		0.300	1.00	1.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-50-8	Copper	3.21	ug/L		0.300	2.00	2.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7439-89-6	Iron	58.3	ug/L	J	33.0	100	100	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7439-95-4	Magnesium	2070	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7439-96-5	Manganese	13.8	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-02-0	Nickel	8.46	ug/L		0.600	2.00	2.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-09-7	Potassium	2430	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-23-5	Sodium	36100	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-61-1	Total Uranium	0.108	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:13	210512-9	2117228
7440-61-1	Uranium-238	0.108	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:13	210512-9	2117228
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:44	210512-10	2117228
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:44	210512-10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198011 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: MW-S11-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-39-3	Barium	8.19	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-70-2	Calcium	2560	ug/L		80.0	200	200	1	MS	PRB	05/13/21 16:25	210513-11	2117228
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7439-95-4	Magnesium	808	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7439-96-5	Manganese	1.23	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-09-7	Potassium	3150	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-23-5	Sodium	3680	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:15	210512-9	2117228
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:15	210512-9	2117228
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:48	210512-10	2117228
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:48	210512-10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198012 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: MW-S11-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	24.9	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-39-3	Barium	7.66	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-70-2	Calcium	2630	ug/L		80.0	200	200	1	MS	PRB	05/13/21 16:27	210513-11	2117228
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-50-8	Copper	0.385	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7439-95-4	Magnesium	769	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7439-96-5	Manganese	1.72	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7439-98-7	Molybdenum	3.54	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-09-7	Potassium	2720	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-23-5	Sodium	4160	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:16	210512-9	2117228
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:16	210512-9	2117228
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:51	210512-10	2117228
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:51	210512-10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198013 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: BEW−3−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7440−38−2	Arsenic	5.19	ug/L		2.00	5.00	5.00	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7440−39−3	Barium	35.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:09	210512−4	2117226
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7440−70−2	Calcium	83400	ug/L		800	2000	2000	10	MS	PRB	05/11/21 22:54	210511−3	2117226
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7439−89−6	Iron	1330	ug/L		33.0	100	100	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7439−95−4	Magnesium	28500	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7439−96−5	Manganese	145	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7439−98−7	Molybdenum	9.06	ug/L		0.200	1.00	1.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7440−02−0	Nickel	0.813	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7440−09−7	Potassium	7030	ug/L		80.0	300	300	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7440−23−5	Sodium	36200	ug/L		80.0	250	250	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 22:36	210511−3	2117226
7440−61−1	Total Uranium	71.2	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.494	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:48	210510−1	2117226
7440−61−1	Uranium−238	70.7	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:48	210510−1	2117226
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 01:25	210510−2	2117226
7440−66−6	Zinc	79.9	ug/L		3.30	20.0	20.0	1	MS	PRB	05/11/21 01:25	210510−2	2117226

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117226	2117224	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198014 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: BEW-3-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-38-2	Arsenic	2.28	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-39-3	Barium	31.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-70-2	Calcium	85200	ug/L		800	2000	2000	10	MS	PRB	05/13/21 16:29	210513-11	2117228
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7439-89-6	Iron	974	ug/L		33.0	100	100	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7439-95-4	Magnesium	29600	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7439-96-5	Manganese	132	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7439-98-7	Molybdenum	8.34	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-02-0	Nickel	0.631	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-09-7	Potassium	7330	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-23-5	Sodium	38000	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-61-1	Total Uranium	71.4	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.510	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:18	210512-9	2117228
7440-61-1	Uranium-238	70.9	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:18	210512-9	2117228
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:55	210512-10	2117228
7440-66-6	Zinc	3.83	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:55	210512-10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198015 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: P-2-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-39-3	Barium	15.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-70-2	Calcium	19300	ug/L		80.0	200	200	1	MS	PRB	05/13/21 16:41	210513-11	2117228
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7439-95-4	Magnesium	5250	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7439-98-7	Molybdenum	0.651	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-02-0	Nickel	0.895	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-09-7	Potassium	2920	ug/L		80.0	300	300	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-23-5	Sodium	29200	ug/L		80.0	250	250	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:31	210512-9	2117228
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:31	210512-9	2117228
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 02:20	210512-10	2117228
7440-66-6	Zinc	17.9	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/13/21 02:20	210512-10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198016 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: P−2−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−39−3	Barium	15.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−70−2	Calcium	19200	ug/L		80.0	200	200	1	MS	PRB	05/13/21 16:43	210513−11	2117228
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7439−95−4	Magnesium	5260	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7439−98−7	Molybdenum	0.645	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−02−0	Nickel	1.02	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−09−7	Potassium	2880	ug/L		80.0	300	300	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−23−5	Sodium	29300	ug/L		80.0	250	250	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:32	210512−9	2117228
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:32	210512−9	2117228
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 02:24	210512−10	2117228
7440−66−6	Zinc	20.0	ug/L		3.30	20.0	20.0	1	MS	PRB	05/13/21 02:24	210512−10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198017 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: MW-SD27-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-36-0	Antimony	1.36	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-39-3	Barium	20.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-70-2	Calcium	23600	ug/L		80.0	200	200	1	MS	PRB	05/13/21 16:45	210513-11	2117228
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7439-95-4	Magnesium	5760	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7439-98-7	Molybdenum	0.223	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-02-0	Nickel	0.719	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-09-7	Potassium	3220	ug/L		80.0	300	300	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-23-5	Sodium	27000	ug/L		80.0	250	250	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:34	210512-9	2117228
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:34	210512-9	2117228
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 02:28	210512-10	2117228
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 02:28	210512-10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198018 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: MW−SD27−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−36−0	Antimony	1.46	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−39−3	Barium	20.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−70−2	Calcium	24100	ug/L		80.0	200	200	1	MS	PRB	05/13/21 16:47	210513−11	2117228
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−50−8	Copper	0.365	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7439−95−4	Magnesium	5870	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7439−98−7	Molybdenum	0.233	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−02−0	Nickel	0.958	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−09−7	Potassium	3260	ug/L		80.0	300	300	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−23−5	Sodium	28100	ug/L		80.0	250	250	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:36	210512−9	2117228
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:36	210512−9	2117228
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 02:31	210512−10	2117228
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 02:31	210512−10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198019 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: HA20-CMT-6S-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	24.0	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-39-3	Barium	20.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-70-2	Calcium	889	ug/L		80.0	200	200	1	MS	PRB	05/13/21 16:48	210513-11	2117228
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-48-4	Cobalt	0.779	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-50-8	Copper	0.307	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7439-89-6	Iron	47.4	ug/L	J	33.0	100	100	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7439-95-4	Magnesium	6610	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7439-96-5	Manganese	19.5	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7439-98-7	Molybdenum	1.12	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-02-0	Nickel	1.73	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-09-7	Potassium	3620	ug/L		80.0	300	300	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-23-5	Sodium	29200	ug/L		80.0	250	250	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-61-1	Total Uranium	0.198	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:54	210512-9	2117228
7440-61-1	Uranium-238	0.198	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:54	210512-9	2117228
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 03:07	210512-10	2117228
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 03:07	210512-10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541198 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541198020 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: HA20−CMT−6S−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−39−3	Barium	20.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−70−2	Calcium	885	ug/L		80.0	200	200	1	MS	PRB	05/13/21 16:50	210513−11	2117228
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−48−4	Cobalt	0.785	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−50−8	Copper	0.545	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7439−95−4	Magnesium	6580	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7439−96−5	Manganese	18.4	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7439−98−7	Molybdenum	0.951	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−02−0	Nickel	1.89	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−09−7	Potassium	3540	ug/L		80.0	300	300	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−23−5	Sodium	29200	ug/L		80.0	250	250	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−61−1	Total Uranium	0.110	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/12/21 21:38	210512−9	2117228
7440−61−1	Uranium−238	0.110	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/12/21 21:38	210512−9	2117228
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 02:35	210512−10	2117228
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 02:35	210512−10	2117228

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117228	2117227	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.1	90.0 − 110.0	MS	10−MAY−21 19:19	210510−1
	Uranium−238	51.3	ug/L	49.64	ug/L	103.3	90.0 − 110.0	MS	10−MAY−21 19:19	210510−1
	Aluminum	5180	ug/L	5050	ug/L	102.5	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Arsenic	48.2	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Calcium	4970	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Chromium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Cobalt	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Copper	52.9	ug/L	50	ug/L	105.8	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Magnesium	5500	ug/L	5000	ug/L	110	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Selenium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Sodium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Vanadium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Zinc	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Antimony	52.9	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Barium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Cadmium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Calcium	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Iron	4920	ug/L	5000	ug/L	98.3	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Lead	46	ug/L	50	ug/L	92	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Manganese	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Molybdenum	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Nickel	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Silver	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Thallium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Thorium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	11−MAY−21 20:19	210511−3
	Beryllium	53	ug/L	50	ug/L	105.9	90.0 − 110.0	MS	12−MAY−21 15:32	210512−4
	Uranium−235	0.36	ug/L	0.36	ug/L	100.4	90.0 − 110.0	MS	12−MAY−21 19:56	210512−9
	Uranium−238	50.5	ug/L	49.64	ug/L	101.7	90.0 − 110.0	MS	12−MAY−21 19:56	210512−9
	Aluminum	4900	ug/L	5050	ug/L	97.1	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Antimony	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Arsenic	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Barium	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Beryllium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Cadmium	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Chromium	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Cobalt	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Copper	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Iron	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Lead	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Magnesium	5210	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Manganese	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Molybdenum	48.4	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Nickel	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Potassium	5220	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Selenium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Silver	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Sodium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Thallium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Thorium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Vanadium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Zinc	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−10
	Calcium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	13−MAY−21 16:05	210513−11
CCV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.6	90.0 − 110.0	MS	10−MAY−21 19:28	210510−1
	Uranium−238	51.7	ug/L	49.64	ug/L	104.2	90.0 − 110.0	MS	10−MAY−21 19:28	210510−1
	Aluminum	5160	ug/L	5050	ug/L	102.1	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Arsenic	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Chromium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Cobalt	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Copper	52.5	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Magnesium	5460	ug/L	5000	ug/L	109.3	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Potassium	5260	ug/L	5000	ug/L	105.1	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Selenium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Sodium	5230	ug/L	5000	ug/L	104.6	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Vanadium	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Zinc	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Antimony	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Barium	53.1	ug/L	50	ug/L	106.2	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Cadmium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Calcium	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Lead	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Manganese	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Molybdenum	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Nickel	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Silver	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Thallium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Thorium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 20:37	210511−3
	Beryllium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	12−MAY−21 15:41	210512−4
	Uranium−235	0.37	ug/L	0.36	ug/L	102.1	90.0 − 110.0	MS	12−MAY−21 20:05	210512−9
	Uranium−238	49.8	ug/L	49.64	ug/L	100.4	90.0 − 110.0	MS	12−MAY−21 20:05	210512−9
	Aluminum	4860	ug/L	5050	ug/L	96.2	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Antimony	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Arsenic	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Barium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Beryllium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Cadmium	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Chromium	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Cobalt	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Copper	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Iron	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10

METALS
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Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Lead	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Magnesium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Manganese	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Molybdenum	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Nickel	52.9	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Potassium	5350	ug/L	5000	ug/L	106.9	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Selenium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Silver	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Sodium	4930	ug/L	5000	ug/L	98.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Thallium	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Thorium	47.9	ug/L	50	ug/L	95.9	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Vanadium	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Zinc	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−10
	Calcium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	13−MAY−21 16:15	210513−11
CCV02										
	Uranium−235	0.35	ug/L	0.36	ug/L	98.6	90.0 − 110.0	MS	10−MAY−21 20:22	210510−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	10−MAY−21 20:22	210510−1
	Aluminum	5080	ug/L	5050	ug/L	100.7	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Arsenic	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Calcium	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Chromium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Cobalt	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Copper	52.9	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Magnesium	5390	ug/L	5000	ug/L	107.8	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Potassium	5250	ug/L	5000	ug/L	105	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Selenium	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Sodium	5190	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Vanadium	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Zinc	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Antimony	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Barium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cadmium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Calcium	5100	ug/L	5000	ug/L	102.1	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Iron	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Lead	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Manganese	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Molybdenum	52.2	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Nickel	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Silver	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Thallium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Thorium	54.9	ug/L	50	ug/L	109.8	90.0 − 110.0	MS	11−MAY−21 20:48	210511−3
	Beryllium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	12−MAY−21 16:36	210512−4
	Uranium−235	0.37	ug/L	0.36	ug/L	101.8	90.0 − 110.0	MS	12−MAY−21 21:06	210512−9
	Uranium−238	51.2	ug/L	49.64	ug/L	103.1	90.0 − 110.0	MS	12−MAY−21 21:06	210512−9
	Aluminum	4940	ug/L	5050	ug/L	97.9	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Antimony	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Arsenic	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Barium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Beryllium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Cadmium	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Chromium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Cobalt	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Copper	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Iron	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Lead	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Magnesium	5280	ug/L	5000	ug/L	105.7	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Manganese	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Molybdenum	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Nickel	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Potassium	5240	ug/L	5000	ug/L	104.8	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Selenium	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Silver	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10

METALS
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Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Sodium	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Thallium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Thorium	53.7	ug/L	50	ug/L	107.4	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Vanadium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Zinc	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	12−MAY−21 23:27	210512−10
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	13−MAY−21 16:37	210513−11
CCV03										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.8	90.0 − 110.0	MS	10−MAY−21 20:39	210510−1
	Uranium−238	51.6	ug/L	49.64	ug/L	103.8	90.0 − 110.0	MS	10−MAY−21 20:39	210510−1
	Aluminum	4880	ug/L	5050	ug/L	96.6	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Arsenic	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Calcium	4730	ug/L	5000	ug/L	94.6	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Chromium	46.9	ug/L	50	ug/L	93.8	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Cobalt	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Copper	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Potassium	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Selenium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Sodium	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Vanadium	47.3	ug/L	50	ug/L	94.5	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Zinc	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Antimony	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Barium	53.6	ug/L	50	ug/L	107.2	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Cadmium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Calcium	5160	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Iron	5010	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Lead	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Manganese	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Molybdenum	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Nickel	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Silver	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thallium	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Thorium	51.8	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	11−MAY−21 21:42	210511−3
	Beryllium	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	12−MAY−21 17:00	210512−4
	Uranium−235	0.36	ug/L	0.36	ug/L	101.4	90.0 − 110.0	MS	12−MAY−21 21:27	210512−9
	Uranium−238	51.2	ug/L	49.64	ug/L	103.1	90.0 − 110.0	MS	12−MAY−21 21:27	210512−9
	Aluminum	4900	ug/L	5050	ug/L	97	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Antimony	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Arsenic	48.6	ug/L	50	ug/L	97.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Barium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Beryllium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Cadmium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Chromium	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Cobalt	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Copper	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Iron	4880	ug/L	5000	ug/L	97.6	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Lead	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Magnesium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Manganese	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Molybdenum	48.6	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Nickel	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Potassium	5210	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Selenium	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Silver	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Sodium	4900	ug/L	5000	ug/L	98.1	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Thallium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Thorium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Vanadium	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Zinc	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	13−MAY−21 01:30	210512−10
	Calcium	4920	ug/L	5000	ug/L	98.4	90.0 − 110.0	MS	13−MAY−21 16:52	210513−11
CCV04										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.2	90.0 − 110.0	MS	10−MAY−21 20:57	210510−1

METALS
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Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Uranium−238	52	ug/L	49.64	ug/L	104.8	90.0 − 110.0	MS	10−MAY−21 20:57	210510−1
	Aluminum	4840	ug/L	5050	ug/L	95.9	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Arsenic	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Calcium	4670	ug/L	5000	ug/L	93.3	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Chromium	47	ug/L	50	ug/L	94	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Cobalt	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Copper	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Magnesium	5170	ug/L	5000	ug/L	103.3	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Potassium	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Selenium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Sodium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Vanadium	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Zinc	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	11−MAY−21 01:07	210510−2
	Antimony	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Barium	53.1	ug/L	50	ug/L	106.2	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Cadmium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Calcium	5000	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Iron	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Lead	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Manganese	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Molybdenum	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Nickel	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Silver	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Thallium	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Thorium	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	11−MAY−21 22:25	210511−3
	Beryllium	47.2	ug/L	50	ug/L	94.4	90.0 − 110.0	MS	12−MAY−21 17:18	210512−4
	Uranium−235	0.36	ug/L	0.36	ug/L	100.4	90.0 − 110.0	MS	12−MAY−21 21:41	210512−9
	Uranium−238	49.2	ug/L	49.64	ug/L	99.1	90.0 − 110.0	MS	12−MAY−21 21:41	210512−9
	Aluminum	4820	ug/L	5050	ug/L	95.5	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Antimony	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Arsenic	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Beryllium	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Cadmium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Chromium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Cobalt	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Copper	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Iron	4910	ug/L	5000	ug/L	98.1	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Lead	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Magnesium	4940	ug/L	5000	ug/L	98.7	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Manganese	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Molybdenum	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Nickel	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Potassium	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Selenium	50.9	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Silver	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Sodium	4750	ug/L	5000	ug/L	95.1	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Thallium	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Thorium	47.7	ug/L	50	ug/L	95.4	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Vanadium	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
	Zinc	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	13−MAY−21 02:13	210512−10
CCV05										
	Aluminum	4820	ug/L	5050	ug/L	95.5	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Arsenic	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Calcium	4580	ug/L	5000	ug/L	91.6	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Chromium	46.8	ug/L	50	ug/L	93.5	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Cobalt	46.8	ug/L	50	ug/L	93.6	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Copper	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Magnesium	5160	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Potassium	4930	ug/L	5000	ug/L	98.5	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Selenium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Sodium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Vanadium	46.8	ug/L	50	ug/L	93.5	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Zinc	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	11−MAY−21 01:43	210510−2
	Antimony	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Barium	55.3	ug/L	50	ug/L	110.5	90.0 − 110.0 *	MS	11−MAY−21 23:09	210511−3
	Cadmium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Iron	4840	ug/L	5000	ug/L	96.8	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Lead	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Manganese	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Molybdenum	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Nickel	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Silver	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Thorium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	11−MAY−21 23:09	210511−3
	Uranium−235	0.37	ug/L	0.36	ug/L	102.8	90.0 − 110.0	MS	12−MAY−21 22:01	210512−9
	Uranium−238	51	ug/L	49.64	ug/L	102.7	90.0 − 110.0	MS	12−MAY−21 22:01	210512−9
	Aluminum	4870	ug/L	5050	ug/L	96.4	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Antimony	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Arsenic	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Barium	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Beryllium	48.8	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Cadmium	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Chromium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Cobalt	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Copper	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Iron	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Lead	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Magnesium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Manganese	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Molybdenum	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Nickel	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10

METALS
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Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Potassium	5150	ug/L	5000	ug/L	102.9	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Selenium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Silver	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Sodium	4860	ug/L	5000	ug/L	97.2	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Thallium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Thorium	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Vanadium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
	Zinc	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	13−MAY−21 02:42	210512−10
CCV06										
	Aluminum	4880	ug/L	5050	ug/L	96.6	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Antimony	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Arsenic	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Barium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Beryllium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Cadmium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Chromium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Cobalt	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Copper	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Iron	5050	ug/L	5000	ug/L	101	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Lead	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Magnesium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Manganese	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Molybdenum	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Nickel	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Potassium	5250	ug/L	5000	ug/L	105	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Selenium	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Silver	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Sodium	4860	ug/L	5000	ug/L	97.3	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Thallium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Thorium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10
	Vanadium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10

METALS
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Initial and Continuing Calibration Verification

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Zinc	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	13−MAY−21 03:22	210512−10

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0014	ug/L	.0014	ug/L	100	80.0 − 120.0	MS	10−MAY−21 19:23	210510−1
	Uranium−238	.21	ug/L	.2	ug/L	104.9	80.0 − 120.0	MS	10−MAY−21 19:23	210510−1
	Aluminum	49.5	ug/L	50	ug/L	99.1	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Arsenic	4.76	ug/L	5	ug/L	95.2	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Calcium	216	ug/L	200	ug/L	108.1	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Chromium	9.88	ug/L	10	ug/L	98.8	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Cobalt	.985	ug/L	1	ug/L	98.5	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Copper	2.09	ug/L	2	ug/L	104.4	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Magnesium	31.5	ug/L	30	ug/L	105.1	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Potassium	320	ug/L	300	ug/L	106.5	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Selenium	4.53	ug/L	5	ug/L	90.6	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Sodium	261	ug/L	250	ug/L	104.5	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Vanadium	19.5	ug/L	20	ug/L	97.7	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Zinc	20.4	ug/L	20	ug/L	102.2	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Antimony	3.09	ug/L	3	ug/L	103.1	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Barium	3.98	ug/L	4	ug/L	99.6	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Cadmium	.964	ug/L	1	ug/L	96.4	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Calcium	257	ug/L	200	ug/L	128.6	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Iron	103	ug/L	100	ug/L	103.3	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Lead	2.11	ug/L	2	ug/L	105.6	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Manganese	5.1	ug/L	5	ug/L	102	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Molybdenum	1.04	ug/L	1	ug/L	103.7	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Nickel	2.06	ug/L	2	ug/L	103	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Silver	1	ug/L	1	ug/L	100.4	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Thallium	2.06	ug/L	2	ug/L	102.8	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Thorium	2.18	ug/L	2	ug/L	108.8	80.0 − 120.0	MS	11−MAY−21 20:26	210511−3
	Beryllium	.534	ug/L	.5	ug/L	106.8	80.0 − 120.0	MS	12−MAY−21 15:35	210512−4
	Uranium−235	.0017	ug/L	.0014	ug/L	121.4	80.0 − 120.0	MS	12−MAY−21 20:00	210512−9
	Uranium−238	.223	ug/L	.2	ug/L	111.5	80.0 − 120.0	MS	12−MAY−21 20:00	210512−9
	Aluminum	49.7	ug/L	50	ug/L	99.4	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Antimony	3.27	ug/L	3	ug/L	109.1	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Arsenic	4.81	ug/L	5	ug/L	96.3	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
	Barium	4.41	ug/L	4	ug/L	110.3	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Beryllium	.528	ug/L	.5	ug/L	105.6	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Cadmium	1.06	ug/L	1	ug/L	105.5	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Chromium	10.3	ug/L	10	ug/L	102.7	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Cobalt	1.05	ug/L	1	ug/L	104.5	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Copper	2.24	ug/L	2	ug/L	111.9	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Iron	104	ug/L	100	ug/L	103.6	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Lead	2.09	ug/L	2	ug/L	104.3	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Magnesium	32.5	ug/L	30	ug/L	108.2	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Manganese	4.97	ug/L	5	ug/L	99.5	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Molybdenum	1.12	ug/L	1	ug/L	112.2	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Nickel	2.17	ug/L	2	ug/L	108.6	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Potassium	320	ug/L	300	ug/L	106.5	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Selenium	5.3	ug/L	5	ug/L	105.9	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Silver	1.05	ug/L	1	ug/L	104.7	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Sodium	262	ug/L	250	ug/L	104.8	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Thallium	2.03	ug/L	2	ug/L	101.6	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Thorium	2.03	ug/L	2	ug/L	101.5	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Vanadium	19.6	ug/L	20	ug/L	98.1	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Zinc	21.8	ug/L	20	ug/L	108.9	80.0 − 120.0	MS	12−MAY−21 23:05	210512−10
	Calcium	263	ug/L	200	ug/L	131.6	80.0 − 120.0	MS	13−MAY−21 16:09	210513−11

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	10−MAY−21 19:21	210510−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	10−MAY−21 19:21	210510−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	10−MAY−21 22:18	210510−2
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	10−MAY−21 22:18	210510−2
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	10−MAY−21 22:18	210510−2
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	11−MAY−21 20:23	210511−3
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	11−MAY−21 20:23	210511−3
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	11−MAY−21 20:23	210511−3
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	12−MAY−21 15:34	210512−4
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	12−MAY−21 19:58	210512−9
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	12−MAY−21 19:58	210512−9
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	12−MAY−21 23:02	210512−10

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	12−MAY−21 23:02	210512−10
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	12−MAY−21 23:02	210512−10
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	12−MAY−21 23:02	210512−10
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	12−MAY−21 23:02	210512−10
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	12−MAY−21 23:02	210512−10
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	13−MAY−21 16:07	210513−11
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 19:30	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 19:30	210510−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 22:36	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 22:36	210510−2

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 22:36	210510−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 22:36	210510−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 20:41	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 20:41	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Molybdenum	0.71	+/−1	J	0.2	1.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	11−MAY−21 20:41	210511−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 15:43	210512−4
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	12−MAY−21 20:07	210512−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	12−MAY−21 20:07	210512−9
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 23:20	210512−10
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	12−MAY−21 23:20	210512−10

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Molybdenum	0.796	+/−1	J	0.2	1.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	12−MAY−21 23:20	210512−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	12−MAY−21 23:20	210512−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 23:20	210512−10
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 16:17	210513−11
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 20:23	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 20:23	210510−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 22:47	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Magnesium	18.1	+/−30	J	10.0	30.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 22:47	210510−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 22:47	210510−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 20:52	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 20:52	210511−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:52	210511−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 20:52	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 20:52	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 20:52	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 20:52	210511−3
	Molybdenum	0.54	+/−1	J	0.2	1.0	LIQ	MS	11−MAY−21 20:52	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 20:52	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:52	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 20:52	210511−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	11−MAY−21 20:52	210511−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 16:38	210512−4
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	12−MAY−21 21:08	210512−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	12−MAY−21 21:08	210512−9
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 23:30	210512−10
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	12−MAY−21 23:30	210512−10
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Molybdenum	0.648	+/−1	J	0.2	1.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	12−MAY−21 23:30	210512−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:30	210512−10

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	12−MAY−21 23:30	210512−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Thorium	0.944	+/−2	J	0.7	2.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 23:30	210512−10
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 16:39	210513−11
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 20:41	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 20:41	210510−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 00:35	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	11−MAY−21 00:35	210510−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 00:35	210510−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 21:46	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 21:46	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 21:46	210511−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 21:46	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 21:46	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 21:46	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 21:46	210511−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 21:46	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 21:46	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 21:46	210511−3

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 21:46	210511−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	11−MAY−21 21:46	210511−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 17:02	210512−4
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	12−MAY−21 21:29	210512−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	12−MAY−21 21:29	210512−9
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	13−MAY−21 01:33	210512−10
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	13−MAY−21 01:33	210512−10
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	13−MAY−21 01:33	210512−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 01:33	210512−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 01:33	210512−10
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 16:54	210513−11
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 20:59	210510−1

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 20:59	210510−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	11−MAY−21 01:11	210510−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 01:11	210510−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 01:11	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	11−MAY−21 01:11	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 01:11	210510−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	11−MAY−21 01:11	210510−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	11−MAY−21 01:11	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	11−MAY−21 01:11	210510−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 01:11	210510−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 01:11	210510−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 01:11	210510−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 01:11	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 22:29	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 22:29	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	11−MAY−21 22:29	210511−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 17:20	210512−4
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	12−MAY−21 21:43	210512−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	12−MAY−21 21:43	210512−9
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 02:17	210512−10

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	13−MAY−21 02:17	210512−10
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	13−MAY−21 02:17	210512−10
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	13−MAY−21 02:17	210512−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 02:17	210512−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 02:17	210512−10
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 02:17	210512−10
CCB05										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	11−MAY−21 01:47	210510−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 01:47	210510−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 01:47	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	11−MAY−21 01:47	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 01:47	210510−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	11−MAY−21 01:47	210510−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	11−MAY−21 01:47	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	11−MAY−21 01:47	210510−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 01:47	210510−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 01:47	210510−2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 01:47	210510−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 01:47	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 23:12	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 23:12	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	11−MAY−21 23:12	210511−3
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	12−MAY−21 22:03	210512−9
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	12−MAY−21 22:03	210512−9
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	13−MAY−21 02:46	210512−10
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	13−MAY−21 02:46	210512−10
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 02:46	210512−10

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	13−MAY−21 02:46	210512−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 02:46	210512−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 02:46	210512−10
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 02:46	210512−10
CCB06										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	13−MAY−21 03:25	210512−10
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	13−MAY−21 03:25	210512−10
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	13−MAY−21 03:25	210512−10
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 03:25	210512−10
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 03:25	210512−10
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 03:25	210512−10

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541198

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 03:25	210512−10

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541198
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204799681								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
1204799686								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541198

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−4−
Interference Check Sample

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0001	ug/L					10−MAY−21 19:25	210510−1
	Uranium−238	0.035	ug/L					10−MAY−21 19:25	210510−1
ICSAB01									
	Uranium−235	0.14	ug/L	.145	ug/L	96.8	80.0 − 120.0	10−MAY−21 19:26	210510−1
	Uranium−238	19.9	ug/L	19.86	ug/L	100	80.0 − 120.0	10−MAY−21 19:26	210510−1

METALS
−4−
Interference Check Sample

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	89300	ug/L	100000	ug/L	89.3	80.0 − 120.0	12−MAY−21 23:09	210512−10
	Antimony	0.133	ug/L					12−MAY−21 23:09	210512−10
	Arsenic	0.145	ug/L					12−MAY−21 23:09	210512−10
	Barium	2.81	ug/L					12−MAY−21 23:09	210512−10
	Beryllium	0.015	ug/L					12−MAY−21 23:09	210512−10
	Cadmium	0.928	ug/L					12−MAY−21 23:09	210512−10
	Chromium	0.704	ug/L					12−MAY−21 23:09	210512−10
	Cobalt	0.466	ug/L					12−MAY−21 23:09	210512−10
	Copper	0.143	ug/L					12−MAY−21 23:09	210512−10
	Iron	84100	ug/L	100000	ug/L	84.1	80.0 − 120.0	12−MAY−21 23:09	210512−10
	Lead	0.187	ug/L					12−MAY−21 23:09	210512−10
	Magnesium	91500	ug/L	100000	ug/L	91.5	80.0 − 120.0	12−MAY−21 23:09	210512−10
	Manganese	5.95	ug/L					12−MAY−21 23:09	210512−10
	Molybdenum	1970	ug/L	2000	ug/L	98.7	80.0 − 120.0	12−MAY−21 23:09	210512−10
	Nickel	0.237	ug/L					12−MAY−21 23:09	210512−10
	Potassium	96000	ug/L	100000	ug/L	96	80.0 − 120.0	12−MAY−21 23:09	210512−10
	Selenium	0.24	ug/L					12−MAY−21 23:09	210512−10
	Silver	0.07	ug/L					12−MAY−21 23:09	210512−10
	Sodium	96300	ug/L	100000	ug/L	96.3	80.0 − 120.0	12−MAY−21 23:09	210512−10
	Thallium	0.101	ug/L					12−MAY−21 23:09	210512−10
	Thorium	1.66	ug/L					12−MAY−21 23:09	210512−10
	Vanadium	−0.426	ug/L					12−MAY−21 23:09	210512−10
	Zinc	1.14	ug/L					12−MAY−21 23:09	210512−10
ICSAB01									
	Aluminum	90900	ug/L	100000	ug/L	90.9	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Antimony	20.8	ug/L	20	ug/L	104	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Arsenic	20.5	ug/L	20	ug/L	103	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Barium	21.9	ug/L	22.35	ug/L	97.9	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Beryllium	18.8	ug/L	20	ug/L	94.1	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Cadmium	19.9	ug/L	20.72	ug/L	95.9	80.0 − 120.0	12−MAY−21 23:12	210512−10

METALS
−4−
Interference Check Sample

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Chromium	20.4	ug/L	20	ug/L	102	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Cobalt	19.9	ug/L	20.65	ug/L	96.3	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Copper	20.4	ug/L	20	ug/L	102	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Iron	85700	ug/L	100000	ug/L	85.7	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Lead	18.6	ug/L	20	ug/L	93.2	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Magnesium	93000	ug/L	100000	ug/L	93	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Manganese	26.0	ug/L	25.72	ug/L	101	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Molybdenum	1960	ug/L	2000	ug/L	98.1	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Nickel	19.2	ug/L	20	ug/L	95.9	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Potassium	98400	ug/L	100000	ug/L	98.4	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Selenium	21.2	ug/L	20	ug/L	106	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Silver	18.4	ug/L	20	ug/L	92.2	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Sodium	98900	ug/L	100000	ug/L	98.9	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Thallium	18.1	ug/L	20	ug/L	90.4	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Thorium	20.4	ug/L	20	ug/L	102	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Vanadium	19.5	ug/L	20	ug/L	97.5	80.0 − 120.0	12−MAY−21 23:12	210512−10
	Zinc	23.1	ug/L	20	ug/L	115	80.0 − 120.0	12−MAY−21 23:12	210512−10

METALS
−4−
Interference Check Sample

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	91000	ug/L	100000	ug/L	91	80.0 − 120.0	13−MAY−21 16:11	210513−11
ICSAB01									
	Calcium	90400	ug/L	100000	ug/L	90.4	80.0 − 120.0	13−MAY−21 16:13	210513−11

METALS
−4−
Interference Check Sample

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	91200	ug/L	100000	ug/L	91.2	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Arsenic	0.224	ug/L					10−MAY−21 22:25	210510−2
	Calcium	93400	ug/L	100000	ug/L	93.4	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Chromium	0.801	ug/L					10−MAY−21 22:25	210510−2
	Cobalt	0.468	ug/L					10−MAY−21 22:25	210510−2
	Copper	0.235	ug/L					10−MAY−21 22:25	210510−2
	Magnesium	94900	ug/L	100000	ug/L	94.9	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Potassium	97800	ug/L	100000	ug/L	97.8	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Selenium	0.237	ug/L					10−MAY−21 22:25	210510−2
	Sodium	99000	ug/L	100000	ug/L	99	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Vanadium	−0.392	ug/L					10−MAY−21 22:25	210510−2
	Zinc	2.69	ug/L					10−MAY−21 22:25	210510−2
ICSAB01									
	Aluminum	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Arsenic	20.2	ug/L	20	ug/L	101	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Calcium	94000	ug/L	100000	ug/L	94	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Chromium	19.9	ug/L	20	ug/L	99.7	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Cobalt	19.4	ug/L	20.65	ug/L	93.8	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Copper	17.6	ug/L	20	ug/L	87.8	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Magnesium	96800	ug/L	100000	ug/L	96.8	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Potassium	99500	ug/L	100000	ug/L	99.5	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Selenium	20.4	ug/L	20	ug/L	102	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Sodium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Vanadium	19.6	ug/L	20	ug/L	98.1	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Zinc	21.6	ug/L	20	ug/L	108	80.0 − 120.0	10−MAY−21 22:29	210510−2

METALS
−4−
Interference Check Sample

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.092	ug/L					11−MAY−21 20:30	210511−3
	Barium	2.83	ug/L					11−MAY−21 20:30	210511−3
	Cadmium	0.943	ug/L					11−MAY−21 20:30	210511−3
	Calcium	93800	ug/L	100000	ug/L	93.8	80.0 − 120.0	11−MAY−21 20:30	210511−3
	Iron	90500	ug/L	100000	ug/L	90.5	80.0 − 120.0	11−MAY−21 20:30	210511−3
	Lead	0.18	ug/L					11−MAY−21 20:30	210511−3
	Manganese	7.02	ug/L					11−MAY−21 20:30	210511−3
	Molybdenum	2150	ug/L	2000	ug/L	108	80.0 − 120.0	11−MAY−21 20:30	210511−3
	Nickel	0.281	ug/L					11−MAY−21 20:30	210511−3
	Silver	0.072	ug/L					11−MAY−21 20:30	210511−3
	Thallium	0.083	ug/L					11−MAY−21 20:30	210511−3
	Thorium	2.08	ug/L					11−MAY−21 20:30	210511−3
ICSAB01									
	Antimony	21.0	ug/L	20	ug/L	105	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Barium	22.6	ug/L	22.35	ug/L	101	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Cadmium	19.7	ug/L	20.72	ug/L	94.9	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Calcium	93900	ug/L	100000	ug/L	93.9	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Iron	89900	ug/L	100000	ug/L	89.9	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Lead	18.2	ug/L	20	ug/L	91.1	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Manganese	26.3	ug/L	25.72	ug/L	102	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Molybdenum	2120	ug/L	2000	ug/L	106	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Nickel	17.8	ug/L	20	ug/L	88.8	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Silver	17.8	ug/L	20	ug/L	89.1	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Thallium	17.9	ug/L	20	ug/L	89.6	80.0 − 120.0	11−MAY−21 20:34	210511−3
	Thorium	22.1	ug/L	20	ug/L	111	80.0 − 120.0	11−MAY−21 20:34	210511−3

METALS
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Interference Check Sample

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.015	ug/L					12−MAY−21 15:37	210512−4
ICSAB01									
	Beryllium	18.9	ug/L	20	ug/L	94.5	80.0 − 120.0	12−MAY−21 15:39	210512−4

METALS
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Interference Check Sample

SDG No: 541198

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0	ug/L					12−MAY−21 20:02	210512−9
	Uranium−238	0.023	ug/L					12−MAY−21 20:02	210512−9
ICSAB01									
	Uranium−235	0.141	ug/L	.145	ug/L	97.5	80.0 − 120.0	12−MAY−21 20:03	210512−9
	Uranium−238	19.3	ug/L	19.86	ug/L	97.4	80.0 − 120.0	12−MAY−21 20:03	210512−9

METALS
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Matrix Spike Summary

SDG NO. 541198 **Client ID** BEW−3−04142021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541198013 **Spike ID:** 1204799683

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Thallium	ug/L	75−125	49.5		0.600	U	50.0	99		MS
Thorium	ug/L	75−125	55.1		0.700	U	50.0	110		MS
Uranium−235	ug/L	75−125	0.881		0.494		0.360	108		MS
Uranium−238	ug/L	75−125	117		70.7		49.6	93.9		MS
Vanadium	ug/L	75−125	49.4		3.30	U	50.0	92.9		MS
Zinc	ug/L	75−125	126		79.9		50.0	92.4		MS
Aluminum	ug/L	75−125	1910		19.3	U	2000	94.7		MS
Antimony	ug/L	75−125	56.1		1.00	U	50.0	111		MS
Arsenic	ug/L	75−125	54.4		5.19		50.0	98.5		MS
Barium	ug/L	75−125	88.8		35.1		50.0	107		MS
Beryllium	ug/L	75−125	54.9		0.200	U	50.0	110		MS
Cadmium	ug/L	75−125	51.1		0.300	U	50.0	102		MS
Calcium	ug/L		85300		83400		2000	92.9	N/A	MS
Chromium	ug/L	75−125	45.4		3.00	U	50.0	90.3		MS
Cobalt	ug/L	75−125	45.1		0.300	U	50.0	90.1		MS
Copper	ug/L	75−125	44.0		0.300	U	50.0	87.9		MS
Iron	ug/L	75−125	3260		1330		2000	96.4		MS
Lead	ug/L	75−125	50.1		0.500	U	50.0	99.7		MS
Magnesium	ug/L		30600		28500		2000	102	N/A	MS
Manganese	ug/L	75−125	189		145		50.0	88.6		MS
Molybdenum	ug/L	75−125	66.3		9.06		50.0	115		MS
Nickel	ug/L	75−125	47.3		0.813	J	50.0	93.1		MS

METALS
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Matrix Spike Summary

SDG NO. 541198 **Client ID:** BEW−3−04142021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541198013 **Spike ID:** 1204799683

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Potassium	ug/L	75−125	9010		7030		2000	99.3		MS
Selenium	ug/L	75−125	47.5		2.00	U	50.0	94.7		MS
Silver	ug/L	75−125	49.7		0.300	U	50.0	99.4		MS
Sodium	ug/L		38400		36200		2000	110	N/A	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541198 **Client ID** BEW−3−04142021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541198013 **Spike ID:** 1204799684

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Silver	ug/L	75−125	49.8		0.300	U	50.0	99.6		MS
Sodium	ug/L		37100		36200		2000	47.9	N/A	MS
Thallium	ug/L	75−125	49.3		0.600	U	50.0	98.5		MS
Thorium	ug/L	75−125	54.5		0.700	U	50.0	109		MS
Uranium−235	ug/L	75−125	0.825		0.494		0.360	92		MS
Uranium−238	ug/L	75−125	113		70.7		49.6	85.1		MS
Vanadium	ug/L	75−125	48.5		3.30	U	50.0	91		MS
Zinc	ug/L	75−125	123		79.9		50.0	86.2		MS
Aluminum	ug/L	75−125	1890		19.3	U	2000	93.9		MS
Antimony	ug/L	75−125	54.5		1.00	U	50.0	108		MS
Arsenic	ug/L	75−125	52.8		5.19		50.0	95.2		MS
Barium	ug/L	75−125	87.2		35.1		50.0	104		MS
Beryllium	ug/L	75−125	52.6		0.200	U	50.0	105		MS
Cadmium	ug/L	75−125	50.7		0.300	U	50.0	101		MS
Calcium	ug/L		84000		83400		2000	27.1	N/A	MS
Chromium	ug/L	75−125	44.9		3.00	U	50.0	89.3		MS
Cobalt	ug/L	75−125	44.8		0.300	U	50.0	89.5		MS
Copper	ug/L	75−125	43.0		0.300	U	50.0	85.8		MS
Iron	ug/L	75−125	3250		1330		2000	95.9		MS
Lead	ug/L	75−125	49.1		0.500	U	50.0	97.7		MS
Magnesium	ug/L		29700		28500		2000	58.8	N/A	MS
Manganese	ug/L	75−125	187		145		50.0	84.3		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541198 **Client ID** BEW−3−04142021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541198013 **Spike ID:** 1204799684

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Molybdenum	ug/L	75−125	64.6		9.06		50.0	111		MS
Nickel	ug/L	75−125	46.4		0.813	J	50.0	91.2		MS
Potassium	ug/L	75−125	8890		7030		2000	92.9		MS
Selenium	ug/L	75−125	47.0		2.00	U	50.0	93.7		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Summary

SDG NO. 541198 **Client ID** BEW−3−04142021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541198014 **Spike ID:** 1204799688

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	1990		19.3	U	2000	99.1		MS
Antimony	ug/L	75−125	53.3		1.00	U	50.0	106		MS
Arsenic	ug/L	75−125	52.6		2.28	J	50.0	101		MS
Barium	ug/L	75−125	82.7		31.9		50.0	102		MS
Beryllium	ug/L	75−125	57.4		0.200	U	50.0	115		MS
Cadmium	ug/L	75−125	49.6		0.300	U	50.0	99.3		MS
Calcium	ug/L		86700		85200		2000	72.8	N/A	MS
Chromium	ug/L	75−125	47.9		3.00	U	50.0	95.6		MS
Cobalt	ug/L	75−125	46.5		0.300	U	50.0	92.9		MS
Copper	ug/L	75−125	45.2		0.300	U	50.0	90.2		MS
Iron	ug/L	75−125	2830		974		2000	92.5		MS
Lead	ug/L	75−125	50.1		0.500	U	50.0	100		MS
Magnesium	ug/L		31100		29600		2000	71.8	N/A	MS
Manganese	ug/L	75−125	179		132		50.0	93.5		MS
Molybdenum	ug/L	75−125	60.4		8.34		50.0	104		MS
Nickel	ug/L	75−125	45.6		0.631	J	50.0	90		MS
Potassium	ug/L	75−125	8960		7330		2000	81.5		MS
Selenium	ug/L	75−125	48.6		2.00	U	50.0	97.2		MS
Silver	ug/L	75−125	49.0		0.300	U	50.0	97.9		MS
Thallium	ug/L	75−125	49.2		0.600	U	50.0	98.3		MS
Thorium	ug/L	75−125	51.7		0.700	U	50.0	103		MS
Uranium−235	ug/L	75−125	0.896		0.510		0.360	107		MS

METALS
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Matrix Spike Summary

SDG NO. 541198 **Client ID** BEW−3−04142021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541198014 **Spike ID:** 1204799688

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−238	ug/L	75−125	122		70.9		49.6	103		MS
Vanadium	ug/L	75−125	50.4		3.30	U	50.0	98.1		MS
Zinc	ug/L	75−125	50.9		3.83	J	50.0	94.2		MS
Sodium	ug/L		39400		38000		2000	72.7	N/A	MS

***Analytical Methods:**
MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541198 **Client ID** BEW−3−04142021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541198014 **Spike ID:** 1204799689

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	1970		19.3	U	2000	98		MS
Antimony	ug/L	75−125	52.9		1.00	U	50.0	106		MS
Arsenic	ug/L	75−125	52.5		2.28	J	50.0	100		MS
Barium	ug/L	75−125	82.2		31.9		50.0	101		MS
Beryllium	ug/L	75−125	56.9		0.200	U	50.0	114		MS
Cadmium	ug/L	75−125	47.9		0.300	U	50.0	95.8		MS
Calcium	ug/L		86700		85200		2000	72.2	N/A	MS
Chromium	ug/L	75−125	47.0		3.00	U	50.0	93.9		MS
Cobalt	ug/L	75−125	44.9		0.300	U	50.0	89.7		MS
Copper	ug/L	75−125	44.1		0.300	U	50.0	88.2		MS
Iron	ug/L	75−125	2810		974		2000	91.9		MS
Lead	ug/L	75−125	48.7		0.500	U	50.0	97.3		MS
Magnesium	ug/L		31100		29600		2000	74.7	N/A	MS
Manganese	ug/L	75−125	180		132		50.0	96.8		MS
Molybdenum	ug/L	75−125	59.7		8.34		50.0	103		MS
Nickel	ug/L	75−125	44.5		0.631	J	50.0	87.7		MS
Potassium	ug/L	75−125	8940		7330		2000	80.8		MS
Selenium	ug/L	75−125	49.7		2.00	U	50.0	99.4		MS
Silver	ug/L	75−125	48.0		0.300	U	50.0	96.1		MS
Sodium	ug/L		39600		38000		2000	80.5	N/A	MS
Thallium	ug/L	75−125	48.1		0.600	U	50.0	96.3		MS
Thorium	ug/L	75−125	50.9		0.700	U	50.0	102		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541198 **Client ID:** BEW−3−04142021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541198014 **Spike ID:** 1204799689

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.882		0.510		0.360	103		MS
Uranium−238	ug/L	75−125	120		70.9		49.6	99.6		MS
Vanadium	ug/L	75−125	49.5		3.30	U	50.0	96.2		MS
Zinc	ug/L	75−125	49.4		3.83	J	50.0	91.2		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 541198 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** BEW−3−04142021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799683 **Duplicate ID:** 1204799684 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1910		1890		.878		MS
Antimony	ug/L	+/−20	56.1		54.5		2.97		MS
Arsenic	ug/L	+/−20	54.4		52.8		3.09		MS
Barium	ug/L	+/−20	88.8		87.2		1.77		MS
Beryllium	ug/L	+/−20	54.9		52.6		4.35		MS
Cadmium	ug/L	+/−20	51.1		50.7		.951		MS
Calcium	ug/L	+/−20	85300		84000		1.56		MS
Chromium	ug/L	+/−20	45.4		44.9		1.1		MS
Cobalt	ug/L	+/−20	45.1		44.8		.698		MS
Copper	ug/L	+/−20	44.0		43.0		2.43		MS
Iron	ug/L	+/−20	3260		3250		.254		MS
Lead	ug/L	+/−20	50.1		49.1		1.95		MS
Magnesium	ug/L	+/−20	30600		29700		2.89		MS
Manganese	ug/L	+/−20	189		187		1.15		MS
Molybdenum	ug/L	+/−20	66.3		64.6		2.68		MS
Nickel	ug/L	+/−20	47.3		46.4		1.96		MS
Potassium	ug/L	+/−20	9010		8890		1.43		MS
Selenium	ug/L	+/−20	47.5		47.0		1.08		MS
Silver	ug/L	+/−20	49.7		49.8		.165		MS
Sodium	ug/L	+/−20	38400		37100		3.27		MS
Thallium	ug/L	+/−20	49.5		49.3		.512		MS
Thorium	ug/L	+/−20	55.1		54.5		1.09		MS
Uranium−235	ug/L	+/−20	0.881		0.825		6.56		MS
Uranium−238	ug/L	+/−20	117		113		3.8		MS
Vanadium	ug/L	+/−20	49.4		48.5		1.94		MS
Zinc	ug/L	+/−20	126		123		2.48		MS

Metals
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Duplicate Sample Summary

SDG No.: 541198 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** BEW−3−04142021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799683 **Duplicate ID:** 1204799684 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

Metals
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Duplicate Sample Summary

SDG No.: 541198 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** BEW−3−04142021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799688 **Duplicate ID:** 1204799689 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1990		1970		1.12		MS
Antimony	ug/L	+/−20	53.3		52.9		.808		MS
Arsenic	ug/L	+/−20	52.6		52.5		.196		MS
Barium	ug/L	+/−20	82.7		82.2		.638		MS
Beryllium	ug/L	+/−20	57.4		56.9		.854		MS
Cadmium	ug/L	+/−20	49.6		47.9		3.52		MS
Calcium	ug/L	+/−20	86700		86700		.0149		MS
Chromium	ug/L	+/−20	47.9		47.0		1.79		MS
Cobalt	ug/L	+/−20	46.5		44.9		3.54		MS
Copper	ug/L	+/−20	45.2		44.1		2.33		MS
Iron	ug/L	+/−20	2830		2810		.455		MS
Lead	ug/L	+/−20	50.1		48.7		2.89		MS
Magnesium	ug/L	+/−20	31100		31100		.189		MS
Manganese	ug/L	+/−20	179		180		.918		MS
Molybdenum	ug/L	+/−20	60.4		59.7		1.19		MS
Nickel	ug/L	+/−20	45.6		44.5		2.51		MS
Potassium	ug/L	+/−20	8960		8940		.165		MS
Selenium	ug/L	+/−20	48.6		49.7		2.25		MS
Silver	ug/L	+/−20	49.0		48.0		1.91		MS
Sodium	ug/L	+/−20	39400		39600		.396		MS
Thallium	ug/L	+/−20	49.2		48.1		2.1		MS
Thorium	ug/L	+/−20	51.7		50.9		1.63		MS
Uranium−235	ug/L	+/−20	0.896		0.882		1.5		MS
Uranium−238	ug/L	+/−20	122		120		1.52		MS
Vanadium	ug/L	+/−20	50.4		49.5		1.86		MS
Zinc	ug/L	+/−20	50.9		49.4		2.96		MS

Metals
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Duplicate Sample Summary

SDG No.: 541198 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** BEW−3−04142021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799688 **Duplicate ID:** 1204799689 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
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Laboratory Control Sample Summary

SDG NO. 541198

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799682								
	Arsenic	ug/L	50.0	45.5		91	80−120	MS
	Barium	ug/L	50.0	51.1		102	80−120	MS
	Beryllium	ug/L	50.0	55.1		110	80−120	MS
	Cadmium	ug/L	50.0	50.0		100	80−120	MS
	Calcium	ug/L	2000	1880		93.9	80−120	MS
	Chromium	ug/L	50.0	44.9		89.9	80−120	MS
	Cobalt	ug/L	50.0	45.2		90.4	80−120	MS
	Copper	ug/L	50.0	45.6		91.3	80−120	MS
	Iron	ug/L	2000	1940		97	80−120	MS
	Lead	ug/L	50.0	52.3		105	80−120	MS
	Magnesium	ug/L	2000	2040		102	80−120	MS
	Manganese	ug/L	50.0	47.9		95.8	80−120	MS
	Molybdenum	ug/L	50.0	52.5		105	80−120	MS
	Nickel	ug/L	50.0	47.6		95.2	80−120	MS
	Potassium	ug/L	2000	2060		103	80−120	MS
	Selenium	ug/L	50.0	46.1		92.2	80−120	MS
	Silver	ug/L	50.0	52.3		105	80−120	MS
	Sodium	ug/L	2000	2010		100	80−120	MS
	Thallium	ug/L	50.0	51.3		103	80−120	MS
	Thorium	ug/L	50.0	51.9		104	80−120	MS
	Uranium−235	ug/L	0.360	0.345		95.8	80−120	MS
	Uranium−238	ug/L	49.6	49.5		99.7	80−120	MS
	Vanadium	ug/L	50.0	47.6		95.1	80−120	MS
	Zinc	ug/L	50.0	47.9		95.8	80−120	MS
	Aluminum	ug/L	2000	1870		93.7	80−120	MS
	Antimony	ug/L	50.0	51.9		104	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Laboratory Control Sample Summary

SDG NO. 541198

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799687								
	Aluminum	ug/L	2000	1960		97.8	80−120	MS
	Antimony	ug/L	50.0	50.4		101	80−120	MS
	Arsenic	ug/L	50.0	46.9		93.8	80−120	MS
	Barium	ug/L	50.0	48.6		97.2	80−120	MS
	Beryllium	ug/L	50.0	55.8		112	80−120	MS
	Cadmium	ug/L	50.0	49.1		98.1	80−120	MS
	Calcium	ug/L	2000	2130		106	80−120	MS
	Chromium	ug/L	50.0	46.6		93.2	80−120	MS
	Cobalt	ug/L	50.0	47.5		94.9	80−120	MS
	Copper	ug/L	50.0	48.8		97.5	80−120	MS
	Iron	ug/L	2000	1920		96	80−120	MS
	Lead	ug/L	50.0	51.0		102	80−120	MS
	Magnesium	ug/L	2000	2090		105	80−120	MS
	Manganese	ug/L	50.0	47.8		95.5	80−120	MS
	Molybdenum	ug/L	50.0	48.5		96.9	80−120	MS
	Nickel	ug/L	50.0	47.3		94.7	80−120	MS
	Potassium	ug/L	2000	2030		102	80−120	MS
	Selenium	ug/L	50.0	47.1		94.1	80−120	MS
	Silver	ug/L	50.0	50.0		100	80−120	MS
	Sodium	ug/L	2000	2050		103	80−120	MS
	Thallium	ug/L	50.0	49.4		98.8	80−120	MS
	Thorium	ug/L	50.0	49.0		98.1	80−120	MS
	Uranium−235	ug/L	0.360	0.353		98	80−120	MS
	Uranium−238	ug/L	49.6	49.5		99.7	80−120	MS
	Vanadium	ug/L	50.0	48.4		96.7	80−120	MS
	Zinc	ug/L	50.0	49.3		98.6	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541198 **Client ID** BEW−3−04142021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541198013 **Serial Dilution ID:** 1204799685

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	5.19		10	U	.462			MS
Barium	35.1		35.2		.1			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	8340		7720		7.484		20	MS
Chromium	3	U	15	U				MS
Cobalt	.3	U	1.5	U				MS
Copper	.3	U	1.5	U				MS
Iron	1330		1220		8.119			MS
Lead	.5	U	2.5	U				MS
Magnesium	28500		28100		1.448		20	MS
Manganese	145		136		5.828		20	MS
Molybdenum	9.06		8.54		5.826			MS
Nickel	.813	J	3	U	4.674			MS
Potassium	7030		6950		1.107			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	36200		34300		5.296		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.494		.483		2.147			MS
Uranium−238	70.7		67.2		5.05		20	MS
Vanadium	3.3	U	16.5	U				MS
Zinc	79.9		83.2	J	4.173			MS

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541198 **Client ID:** BEW−3−04142021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541198013 **Serial Dilution ID:** 1204799685

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541198 **Client ID** BEW−3−04142021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541198014 **Serial Dilution ID:** 1204799690

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2.28	J	10	U	6.004			MS
Barium	31.9		32.7		2.555			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	8520		8140		4.49		20	MS
Chromium	3	U	15	U				MS
Cobalt	.3	U	1.5	U				MS
Copper	.3	U	1.5	U				MS
Iron	974		1010		4.014			MS
Lead	.5	U	2.5	U				MS
Magnesium	29600		29500		.594		20	MS
Manganese	132		137		3.584		20	MS
Molybdenum	8.34		8.49		1.762			MS
Nickel	.631	J	3	U	.951			MS
Potassium	7330		7210		1.65			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	38000		34800		8.286		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.51		.501		1.707			MS
Uranium−238	70.9		69.3		2.24		20	MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.83	J	16.5	U	85.001			MS

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541198 **Client ID** BEW−3−04142021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541198014 **Serial Dilution ID:** 1204799690

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 541198 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2117224							
1204799681	MB for batch 2117224	MB	G	22−APR−21	50mL	50mL	
1204799682	LCS for batch 2117224	LCS	G	22−APR−21	50mL	50mL	
1204799683	BEW−3−04142021S	MS	G	22−APR−21	50mL	50mL	
1204799684	BEW−3−04142021SD	MSD	G	22−APR−21	50mL	50mL	
541198001	HA20−CMT−512−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
541198002	HA20−CMT−512−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
541198003	MW−SD30−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
541198004	MW−SD30−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
541198005	MW−SD06−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
541198006	MW−SD06−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
541198007	P−1−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
541198008	P−1−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
541198009	MW−SM13−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
541198013	BEW−3−04142021	SAMPLE	G	22−APR−21	50mL	50mL	
Batch Number 2117227							
1204799686	MB for batch 2117227	MB	G	23−APR−21	50mL	50mL	
1204799687	LCS for batch 2117227	LCS	G	23−APR−21	50mL	50mL	
1204799688	BEW−3−04142021S	MS	G	23−APR−21	50mL	50mL	
1204799689	BEW−3−04142021SD	MSD	G	23−APR−21	50mL	50mL	

SW846

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 541198 **Method Type**: MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
541198010	MW−SM13−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541198011	MW−S11−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541198012	MW−S11−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541198014	BEW−3−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541198015	P−2−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541198016	P−2−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541198017	MW−SD27−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541198018	MW−SD27−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541198019	HA20−CMT−6S−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541198020	HA20−CMT−6S−04142021	SAMPLE	G	23−APR−21	50mL	50mL	

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541198

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 10-MAY-21

End Date: 11-MAY-21

Data File: 210510-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:14:19																							X	X		
S10	1	19:16:06																							X	X		
S100	1	19:17:52																							X	X		
ICV01	1	19:19:39																							X	X		
ICB01	1	19:21:26																							X	X		
CRDL01	1	19:23:14																							X	X		
ICSA01	1	19:25:01																							X	X		
ICSAB01	1	19:26:50																							X	X		
CCV01	1	19:28:37																							X	X		
CCB01	1	19:30:24																							X	X		
ZZZZZZ	1	19:32:12																										
ZZZZZZ	1	19:33:59																										
ZZZZZZ	1	19:35:45																										
ZZZZZZ	1	19:37:32																										
ZZZZZZ	1	19:39:19																										
ZZZZZZ	1	19:41:06																										
ZZZZZZ	1	19:42:52																										
ZZZZZZ	1	19:44:39																										
ZZZZZZ	5	19:46:26																										
CCV	1	19:48:14																							X	X		
CCB	1	19:50:02																							X	X		
ZZZZZZ	1	19:51:49																										
ZZZZZZ	1	19:53:36																										
ZZZZZZ	1	19:55:22																										
ZZZZZZ	1	19:57:09																										
ZZZZZZ	5	19:58:56																										
ZZZZZZ	1	20:00:43																										
ZZZZZZ	1	20:02:30																										
CCV	1	20:04:17																							X	X		
CCB	1	20:06:05																							X	X		
ZZZZZZ	1	20:07:52																										
ZZZZZZ	1	20:09:39																										
ZZZZZZ	1	20:11:26																										
ZZZZZZ	1	20:13:13																										
ZZZZZZ	1	20:15:00																										
ZZZZZZ	1	20:16:46																										
ZZZZZZ	1	20:18:33																										
ZZZZZZ	1	20:20:20																										
CCV02	1	20:22:07																							X	X		
CCB02	1	20:23:55																							X	X		
1204799681	1	20:25:43																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541198

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
1204799682	1	20:27:30																							X	X		
541198001	1	20:29:16																							X	X		
541198002	1	20:31:03																							X	X		
541198003	1	20:32:50																							X	X		
541198004	1	20:34:37																							X	X		
541198005	1	20:36:24																							X	X		
541198006	1	20:38:10																							X	X		
CCV03	1	20:39:58																							X	X		
CCB03	1	20:41:45																							X	X		
541198007	1	20:43:32																							X	X		
541198008	1	20:45:19																							X	X		
541198009	1	20:47:05																							X	X		
541198013	1	20:48:51																							X	X		
1204799683	1	20:50:38																							X	X		
1204799684	1	20:52:25																							X	X		
ZZZZZZ	1	20:54:12																										
1204799685	5	20:55:59																							X	X		
CCV04	1	20:57:45																							X	X		
CCB04	1	20:59:33																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541198

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	22:03:49	X		X				X	X	X	X			X				X	X		X					X	X
S10	1	22:07:25	X		X				X	X	X	X			X				X	X		X					X	X
S100	1	22:11:02	X		X				X	X	X	X			X				X	X		X					X	X
ICV01	1	22:14:39	X		X				X	X	X	X			X				X	X		X					X	X
ICB01	1	22:18:16	X		X				X	X	X	X			X				X	X		X					X	X
CRDL01	1	22:21:52	X		X				X	X	X	X			X				X	X		X					X	X
ICSA01	1	22:25:29	X		X				X	X	X	X			X				X	X		X					X	X
ICSAB01	1	22:29:05	X		X				X	X	X	X			X				X	X		X					X	X
CCV01	1	22:32:42	X		X				X	X	X	X			X				X	X		X					X	X
CCB01	1	22:36:19	X		X				X	X	X	X			X				X	X		X					X	X
LR01	1	22:39:56	X		X				X	X	X	X			X				X	X		X					X	X
CCV02	1	22:43:33	X		X				X	X	X	X			X				X	X		X					X	X
CCB02	1	22:47:10	X		X				X	X	X	X			X				X	X		X					X	X
ZZZZZZ	1	22:50:47																										
ZZZZZZ	1	22:54:23																										
ZZZZZZ	1	22:58:00																										
ZZZZZZ	1	23:01:37																										
ZZZZZZ	1	23:05:13																										
ZZZZZZ	1	23:08:50																										
ZZZZZZ	1	23:12:26																										
ZZZZZZ	1	23:16:03																										
ZZZZZZ	5	23:19:39																										
CCV	1	23:23:15	X		X				X	X	X	X			X				X	X		X					X	X
CCB	1	23:26:52	X		X				X	X	X	X			X				X	X		X					X	X
ZZZZZZ	1	23:30:29																										
ZZZZZZ	1	23:34:05																										
ZZZZZZ	1	23:37:41																										
ZZZZZZ	1	23:41:17																										
ZZZZZZ	5	23:44:53																										
ZZZZZZ	1	23:48:28																										
ZZZZZZ	1	23:52:04																										
CCV	1	23:55:41	X		X				X	X	X	X			X				X	X		X					X	X
CCB	1	23:59:17	X		X				X	X	X	X			X				X	X		X					X	X
ZZZZZZ	1	00:02:54																										
ZZZZZZ	1	00:06:30																										
ZZZZZZ	1	00:10:05																										
ZZZZZZ	1	00:13:41																										
ZZZZZZ	1	00:17:17																										
ZZZZZZ	1	00:20:53																										
ZZZZZZ	1	00:24:29																										
ZZZZZZ	1	00:28:06																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541198

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCV03	1	00:31:44	X		X				X	X	X	X			X				X	X		X					X	X
CCB03	1	00:35:21	X		X				X	X	X	X			X				X	X		X					X	X
1204799681	1	00:38:59	X		X				X	X	X	X			X				X	X		X					X	X
1204799682	1	00:42:35	X		X				X	X	X	X			X				X	X		X					X	X
541198001	1	00:46:10	X		X				X	X	X	X			X				X	X		X					X	X
541198002	1	00:49:46	X		X				X	X	X	X			X				X	X		X					X	X
541198003	1	00:53:23	X		X				X	X	X	X			X				X	X		X					X	X
541198004	1	00:57:00	X		X				X	X	X	X			X				X	X		X					X	X
541198005	1	01:00:36	X		X				X	X	X	X			X				X	X		X					X	X
541198006	1	01:04:12	X		X				X	X	X	X			X				X	X		X					X	X
CCV04	1	01:07:51	X		X				X	X	X	X			X				X	X		X					X	X
CCB04	1	01:11:27	X		X				X	X	X	X			X				X	X		X					X	X
541198007	1	01:15:04	X		X				X	X	X	X			X				X	X		X					X	X
541198008	1	01:18:41	X		X				X	X	X	X			X				X	X		X					X	X
541198009	1	01:22:17	X		X				X	X	X	X			X				X	X		X					X	X
541198013	1	01:25:54	X		X					X	X	X			X				X	X		X					X	X
1204799683	1	01:29:30	X		X					X	X	X			X				X	X		X					X	X
1204799684	1	01:33:06	X		X					X	X	X			X				X	X		X					X	X
ZZZZZZZ	1	01:36:41																										
1204799685	5	01:40:17	X		X					X	X	X			X				X	X		X					X	X
CCV05	1	01:43:55	X		X				X	X	X	X			X				X	X		X					X	X
CCB05	1	01:47:31	X		X				X	X	X	X			X				X	X		X					X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541198

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 11-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210511-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	20:08:46		X		X		X	X				X	X		X	X	X			X		X	X				
S10	1	20:12:22		X		X		X	X				X	X		X	X	X			X		X	X				
S100	1	20:15:59		X		X		X	X				X	X		X	X	X			X		X	X				
ICV01	1	20:19:35		X		X		X	X				X	X		X	X	X			X		X	X				
ICB01	1	20:23:12		X		X		X	X				X	X		X	X	X			X		X	X				
CRDL01	1	20:26:48		X		X		X	X				X	X		X	X	X			X		X	X				
ICSA01	1	20:30:25		X		X		X	X				X	X		X	X	X			X		X	X				
ICSAB01	1	20:34:01		X		X		X	X				X	X		X	X	X			X		X	X				
CCV01	1	20:37:38		X		X		X	X				X	X		X	X	X			X		X	X				
CCB01	1	20:41:15		X		X		X	X				X	X		X	X	X			X		X	X				
LR01	1	20:44:52		X		X		X	X				X	X		X	X	X			X		X	X				
CCV02	1	20:48:29		X		X		X	X				X	X		X	X	X			X		X	X				
CCB02	1	20:52:06		X		X		X	X				X	X		X	X	X			X		X	X				
ZZZZZZ	2	20:55:43																										
ZZZZZZ	2	20:59:19																										
CCV	1	21:02:57		X		X		X	X				X	X		X	X	X			X		X	X				
CCB	1	21:06:34		X		X		X	X				X	X		X	X	X			X		X	X				
ZZZZZZ	2	21:10:12																										
ZZZZZZ	2	21:13:48																										
ZZZZZZ	2	21:17:24																										
ZZZZZZ	2	21:21:00																										
ZZZZZZ	10	21:24:36																										
ZZZZZZ	20	21:28:12																										
ZZZZZZ	20	21:31:48																										
ZZZZZZ	20	21:35:24																										
ZZZZZZ	100	21:38:59																										
CCV03	1	21:42:37		X		X		X	X				X	X		X	X	X			X		X	X				
CCB03	1	21:46:14		X		X		X	X				X	X		X	X	X			X		X	X				
1204799681	1	21:49:52		X		X		X					X	X		X	X	X			X		X	X				
1204799682	1	21:53:28		X		X		X					X	X		X	X	X			X		X	X				
541198001	1	21:57:05		X		X		X					X	X		X	X	X			X		X	X				
541198002	1	22:00:42		X		X		X					X	X		X	X	X			X		X	X				
541198003	1	22:04:19		X		X		X					X	X		X	X	X			X		X	X				
541198004	1	22:07:54		X		X		X					X	X		X	X	X			X		X	X				
541198005	1	22:11:30		X		X		X					X	X		X	X	X			X		X	X				
541198006	1	22:15:06		X		X		X					X	X		X	X	X			X		X	X				
541198007	1	22:18:43		X		X		X					X	X		X	X	X			X		X	X				
541198008	1	22:22:19		X		X		X					X	X		X	X	X			X		X	X				
CCV04	1	22:25:56		X		X		X	X				X	X		X	X	X			X		X	X				
CCB04	1	22:29:33		X		X		X	X				X	X		X	X	X			X		X	X				
541198009	1	22:33:10		X		X		X					X	X		X	X	X			X		X	X				

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541198

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 11-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210511-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541198013	1	22:36:46		X		X		X					X	X		X	X	X			X		X	X				
1204799683	1	22:40:22		X		X		X					X	X		X	X	X			X		X	X				
1204799684	1	22:43:57		X		X		X					X	X		X	X	X			X		X	X				
ZZZZZZ	1	22:47:33																										
1204799685	5	22:51:09		X		X		X					X	X		X	X	X			X		X	X				
541198013	10	22:54:45							X																			
1204799683	10	22:58:22							X																			
1204799684	10	23:01:58							X																			
1204799685	50	23:05:34							X																			
CCV05	1	23:09:11		X		X		X	X				X	X		X	X	X			X		X	X				
CCB05	1	23:12:48		X		X		X	X				X	X		X	X	X			X		X	X				

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541198

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 12-MAY-21

End Date: 13-MAY-21

Data File: 210512-10

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	22:47:44	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	22:51:21	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	22:54:57	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	22:58:34	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	23:02:10	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	23:05:46	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	23:09:22	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	23:12:57	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	23:16:34	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	23:20:10	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	23:23:46	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	23:27:22	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	23:30:59	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	23:34:35																										
ZZZZZZ	1	23:38:12																										
ZZZZZZ	1	23:41:48																										
ZZZZZZ	1	23:45:25																										
ZZZZZZ	1	23:49:02																										
ZZZZZZ	1	23:52:38																										
ZZZZZZ	1	23:56:15																										
ZZZZZZ	1	23:59:52																										
ZZZZZZ	1	00:03:29																										
CCV	1	00:07:06	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	00:10:43	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:14:20																										
ZZZZZZ	1	00:17:57																										
ZZZZZZ	1	00:21:33																										
ZZZZZZ	1	00:25:10																										
ZZZZZZ	5	00:28:47																										
ZZZZZZ	1	00:32:23																										
ZZZZZZ	1	00:36:00																										
ZZZZZZ	1	00:39:37																										
ZZZZZZ	1	00:43:14																										
ZZZZZZ	1	00:46:50																										
CCV	1	00:50:28	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	00:54:05	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:57:43																										
ZZZZZZ	1	01:01:20																										
ZZZZZZ	1	01:04:57																										
ZZZZZZ	1	01:08:34																										
ZZZZZZ	1	01:12:10																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541198

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 12-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210512-10

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	01:15:47																										
ZZZZZZ	1	01:19:23																										
ZZZZZZ	1	01:23:00																										
ZZZZZZ	1	01:26:37																										
CCV03	1	01:30:14	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	01:33:51	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799686	1	01:37:29	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799687	1	01:41:06	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541198010	1	01:44:43	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541198011	1	01:48:19	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541198012	1	01:51:56	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541198014	1	01:55:33	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799688	1	01:59:09	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799689	1	02:02:46	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	02:06:23																										
1204799690	5	02:10:00	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	02:13:38	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	02:17:15	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541198015	1	02:20:53	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541198016	1	02:24:30	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541198017	1	02:28:07	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541198018	1	02:31:43	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541198020	1	02:35:20	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	02:38:57																										
CCV05	1	02:42:35	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	02:46:12	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	02:49:50																										
ZZZZZZ	1	02:53:26																										
ZZZZZZ	1	02:57:03																										
ZZZZZZ	1	03:00:40																										
ZZZZZZ	1	03:04:17																										
541198019	1	03:07:54	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	5	03:11:30																										
ZZZZZZ	1	03:15:07																										
ZZZZZZ	1	03:18:44																										
CCV06	1	03:22:22	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB06	1	03:25:59	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541198

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 12-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210512-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	15:26:50					X																					
S10	1	15:28:38					X																					
S100	1	15:30:27					X																					
ICV01	1	15:32:15					X																					
ICB01	1	15:34:03					X																					
CRDL01	1	15:35:51					X																					
ICSA01	1	15:37:39					X																					
ICSAB01	1	15:39:27					X																					
CCV01	1	15:41:16					X																					
CCB01	1	15:43:05					X																					
ZZZZZZ	1	15:44:53																										
ZZZZZZ	1	15:46:41																										
ZZZZZZ	1	15:48:29																										
ZZZZZZ	1	15:50:18																										
ZZZZZZ	1	15:52:06																										
ZZZZZZ	1	15:53:54																										
ZZZZZZ	1	15:57:17																										
ZZZZZZ	1	15:59:04																										
ZZZZZZ	5	16:00:52																										
CCV	1	16:02:41					X																					
CCB	1	16:04:30					X																					
ZZZZZZ	1	16:06:19																										
ZZZZZZ	1	16:08:07																										
ZZZZZZ	1	16:09:55																										
ZZZZZZ	1	16:11:43																										
ZZZZZZ	5	16:13:31																										
ZZZZZZ	1	16:15:19																										
ZZZZZZ	1	16:17:07																										
CCV	1	16:18:56					X																					
CCB	1	16:20:44					X																					
ZZZZZZ	1	16:22:33																										
ZZZZZZ	1	16:24:22																										
ZZZZZZ	1	16:26:10																										
ZZZZZZ	1	16:27:58																										
ZZZZZZ	1	16:29:46																										
ZZZZZZ	1	16:31:33																										
ZZZZZZ	1	16:33:21																										
ZZZZZZ	1	16:35:09																										
CCV02	1	16:36:58					X																					
CCB02	1	16:38:47					X																					
1204799681	1	16:40:36					X																					

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541198

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 12-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210512-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
1204799682	1	16:42:24					X																					
541198001	1	16:44:12					X																					
541198002	1	16:46:00					X																					
541198003	1	16:47:48					X																					
541198004	1	16:49:36					X																					
541198005	1	16:51:24					X																					
541198006	1	16:53:12					X																					
ZZZZZZ	1	16:58:41																										
CCV03	1	17:00:31					X																					
CCB03	1	17:02:20					X																					
541198007	1	17:04:09					X																					
541198008	1	17:05:57					X																					
541198009	1	17:07:45					X																					
541198013	1	17:09:33					X																					
1204799683	1	17:11:21					X																					
1204799684	1	17:13:09					X																					
ZZZZZZ	1	17:14:58																										
1204799685	5	17:16:46					X																					
CCV04	1	17:18:36					X																					
CCB04	1	17:20:24					X																					

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541198

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 12-MAY-21

End Date: 13-MAY-21

Data File: 210512-9

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:51:23																							X	X		
S10	1	19:53:10																							X	X		
S100	1	19:54:56																							X	X		
ICV01	1	19:56:43																							X	X		
ICB01	1	19:58:30																							X	X		
CRDL01	1	20:00:17																							X	X		
ICSA01	1	20:02:06																							X	X		
ICSAB01	1	20:03:54																							X	X		
CCV01	1	20:05:41																							X	X		
CCB01	1	20:07:29																							X	X		
ZZZZZZ	1	20:09:17																										
ZZZZZZ	1	20:11:03																										
ZZZZZZ	1	20:12:50																										
ZZZZZZ	1	20:14:37																										
ZZZZZZ	1	20:16:23																										
ZZZZZZ	1	20:18:10																										
ZZZZZZ	1	20:19:56																										
ZZZZZZ	1	20:21:43																										
ZZZZZZ	1	20:23:29																										
CCV	1	20:25:17																							X	X		
CCB	1	20:27:04																							X	X		
ZZZZZZ	1	20:28:51																										
ZZZZZZ	1	20:30:38																										
ZZZZZZ	1	20:32:25																										
ZZZZZZ	1	20:34:11																										
ZZZZZZ	5	20:35:58																										
ZZZZZZ	1	20:37:44																										
ZZZZZZ	1	20:39:31																										
ZZZZZZ	1	20:41:17																										
ZZZZZZ	1	20:43:04																										
ZZZZZZ	1	20:44:50																										
CCV	1	20:46:38																							X	X		
CCB	1	20:48:25																							X	X		
ZZZZZZ	1	20:50:12																										
ZZZZZZ	1	20:51:59																										
ZZZZZZ	1	20:53:46																										
ZZZZZZ	1	20:55:32																										
ZZZZZZ	1	20:57:19																										
ZZZZZZ	1	20:59:05																										
ZZZZZZ	1	21:00:52																										
ZZZZZZ	1	21:02:39																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541198

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 12-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210512-9

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	21:04:25																										
CCV02	1	21:06:13																							X	X		
CCB02	1	21:08:00																							X	X		
1204799686	1	21:09:47																							X	X		
1204799687	1	21:11:34																							X	X		
541198010	1	21:13:21																							X	X		
541198011	1	21:15:07																							X	X		
541198012	1	21:16:54																							X	X		
541198014	1	21:18:40																							X	X		
1204799688	1	21:20:27																							X	X		
1204799689	1	21:22:13																							X	X		
ZZZZZZ	1	21:24:00																										
1204799690	5	21:25:47																							X	X		
CCV03	1	21:27:34																							X	X		
CCB03	1	21:29:21																							X	X		
541198015	1	21:31:08																							X	X		
541198016	1	21:32:55																							X	X		
541198017	1	21:34:41																							X	X		
541198018	1	21:36:28																							X	X		
541198020	1	21:38:14																							X	X		
ZZZZZZ	1	21:40:01																										
CCV04	1	21:41:48																							X	X		
CCB04	1	21:43:36																							X	X		
ZZZZZZ	1	21:45:23																										
ZZZZZZ	1	21:47:09																										
ZZZZZZ	1	21:48:56																										
ZZZZZZ	1	21:50:43																										
ZZZZZZ	1	21:52:29																										
541198019	1	21:54:16																							X	X		
ZZZZZZ	5	21:56:02																										
ZZZZZZ	1	21:57:49																										
ZZZZZZ	1	21:59:35																										
CCV05	1	22:01:23																							X	X		
CCB05	1	22:03:10																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541198

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 13-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210513-11

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	15:59:08							X																			
S10	1	16:01:07							X																			
S100	1	16:03:06							X																			
ICV01	1	16:05:06							X																			
ICB01	1	16:07:05							X																			
CRDL01	1	16:09:05							X																			
ICSA01	1	16:11:04							X																			
ICSAB01	1	16:13:03							X																			
CCV01	1	16:15:03							X																			
CCB01	1	16:17:02							X																			
1204799686	1	16:19:02							X																			
1204799687	1	16:21:02							X																			
541198010	1	16:23:01							X																			
541198011	1	16:25:01							X																			
541198012	1	16:27:01							X																			
541198014	10	16:29:00							X																			
1204799688	10	16:31:00							X																			
1204799689	10	16:33:00							X																			
1204799690	50	16:35:00							X																			
CCV02	1	16:37:01							X																			
CCB02	1	16:39:01							X																			
541198015	1	16:41:01							X																			
541198016	1	16:43:01							X																			
541198017	1	16:45:00							X																			
541198018	1	16:47:00							X																			
541198019	1	16:48:59							X																			
541198020	1	16:50:59							X																			
CCV03	1	16:52:59							X																			
CCB03	1	16:54:59							X																			

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 541198

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 541198

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117224**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799682	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799682	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799683	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799683	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799684	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799684	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204799681 MB	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204799682 LCS	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198001	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198002	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198003	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198004	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198005	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198006	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198007	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198008	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198009	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541198013	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204799685 SDILT (541198013)	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204799683 MS (541198013)	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204799684 MSD (541198013)	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3267483	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 94 C
Temperature within limits (Y/N)?: y
Thermometer ID: 12411
Hot Block ID: 14
Digestion tube lot #: 2012333

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117227**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799687	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799687	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799688	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799688	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799689	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799689	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	**Prep Date**	**Matrix**	**Initial Volume (mL)**	**Hot Block Stop Date (date)**	**Final Volume (mL)**	**Prep Factor (mL/mL)**	**pH Check**
1204799686 MB	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
1204799687 LCS	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198010	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198011	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198012	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198014	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
1204799690 SDILT (541198014)	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
1204799688 MS (541198014)	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
1204799689 MSD (541198014)	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198015	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198016	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198017	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198018	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198019	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541198020	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2

Reagent/Solvent Lot ID	**Description**	**Amount**
3279375	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 91 C
Temperature within limits (Y/N)?: y
Thermometer ID: 1120212072
Hot Block ID: 11
Digestion tube lot #: 2008043

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 13, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541199

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 17, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04142021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541199

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541199

May 13, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 17, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541199001	HB-10S-04142021
541199002	HB-10S-04142021
541199003	P-3-04142021
541199004	P-3-04142021
541199005	EQ Blank1-04122021
541199006	EQ Blank1-04122021
541199007	PW-6-04142021
541199008	PW-6-04142021
541199009	MW-S01-04142021
541199010	MW-S01-04142021
541199011	MW-S01-04142021DUP
541199012	MW-S01-04142021DUP
541199013	MW-S27-04142021
541199014	MW-S27-04142021
541199015	HA20-CMT-6I-04142021
541199016	HA20-CMT-6I-04142021
541199017	HBPZ-2R-04142021
541199018	HBPZ-2R-04142021
541199019	HB-10-04142021
541199020	HB-10-04142021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Project # 3252H
GEL Quote #: GELP18-1125
COC Number (1): 04142021
PO Number:

GEL Laboratories LLC
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
gel.com

Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541199

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) NI	Dissolved Metals (6020A ICP-MS) NI	U-235/U-238 plus Total U Calc. NI	Comments Note: extra sample is required for sample specific QC
												<-- Preservative Type (6)
B-10S-04142021	4/14/2021	11:30	N	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
P-3-04142021	4/14/2021	12:45	N	Y	GW	U238		2	X	X	X	
EQ Blank1-04142021	4/14/2021	13:00	N	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
PW-6-04142021	4/14/2021	13:30	N	Y	GW	U238		2	X	X	X	
MW-S01-04142021	4/14/2021	13:40	N	Y	GW	U238		2	X	X	X	
MW-S01-04142021DUP	4/14/2021	13:45	FD	Y	GW	U238		2	X	X	X	
MW-S27-04142021	4/14/2021	13:55	N	Y	GW	U238		2	X	X	X	
HA20-CMT-6I-04142021	4/14/2021	14:00	N	Y	GW	U238		2	X	X	X	U-235/U-238 plus Total U Calc. for Total and Dissolved
HBPZ-2R-04142021	4/14/2021	14:05	N	Y	GW	U238		2	X	X	X	
HB-10-04142021	4/14/2021	14:30	N	Y	GW	U238		2	X	X	X	

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 [signature]	4/16/2021	0800	1 [signature]	4/16/21	0800
2 [signature]	4/16/21	1530	2 [signature]	41721	920
3			3		

TAT Requested: Normal: X Rush: ____ Specify: ______

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via NaI, mn

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541199
Received By: Stacy Boone	Date Received: April 17, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 6884 6500 3°c 7734 6884 6451 4°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?	✓		COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?	✓		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:________
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?			✓	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) SEE ATTACHED
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7734 6884 6716 3°c 7734 6884 5948 2°c

7734 6884 6201 3°c 7734 6884 6407 4°c

PM (or PMA) review: Initials MB Date 4/19/21 Page 1 of 2

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC SAMPLE RECEIPT & REVIEW CONTINUATION FORM

Client: DMAX Received By: SB Date Received: 4/17/21 SDG/AR/COC/Work Order: 541199

ID:	COC TIME:	SAMPLE TIME:
HB-10-04142021	14:30	16:05
HBPZ-2R-04142021	14:05	14:30
HA20-CMT-61-04142021	14:00	14:05
~~GW~~		
GZW-11-2-04152021	13:05	16:05

PM (or PMA) review: Initials MB Date 4/19/21 Page 2 of 2

Work Order Containers

Sample ID: **541199001**
Client Sample ID: **HB−10S−04142021**
Description: **Ground Water**

Label: 541199001.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199001.01.01 **Type: New Undefined**

10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199002**
Client Sample ID: **HB−10S−04142021**
Description: **Dissolved Ground Water**

Label: 541199002.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199002.01.01 **Type: New Undefined**

10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199003**
Client Sample ID: **P−3−04142021**
Description: **Ground Water**

Label: 541199003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to

Work Order Containers

Sample ID: **541199003**
Client Sample ID: **P−3−04142021**
Description: **Ground Water**

Label: 541199003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541199003.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199004**
Client Sample ID: **P−3−04142021**
Description: **Dissolved Ground Water**

Label: 541199004.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541199004.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199005**
Client Sample ID: **EQ Blank1−04122021**
Description: **Ground Water**

Label: 541199005.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541199005**
Client Sample ID: **EQ Blank1−04122021**
Description: **Ground Water**

Label: 541199005.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199006**
Client Sample ID: **EQ Blank1−04122021**
Description: **Dissolved Ground Water**

Label: 541199006.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199006.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199007**
Client Sample ID: **PW−6−04142021**
Description: **Ground Water**

Label: 541199007.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199007.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541199008**
Client Sample ID: **PW−6−04142021**
Description: **Dissolved Ground Water**

Label: 541199008.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199008.01.01	Type: New Undefined	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199009**
Client Sample ID: **MW−S01−04142021**
Description: **Ground Water**

Label: 541199009.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199009.01.01	Type: New Undefined	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199010**
Client Sample ID: **MW−S01−04142021**
Description: **Dissolved Ground Water**

Label: 541199010.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to

Work Order Containers

Sample ID: **541199010**
Client Sample ID: **MW−S01−04142021**
Description: **Dissolved Ground Water**

Label: 541199010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199010.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199011**
Client Sample ID: **MW−S01−04142021DUP**
Description: **Ground Water**

Label: 541199011.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199011.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199012**
Client Sample ID: **MW−S01−04142021DUP**
Description: **Dissolved Ground Water**

Label: 541199012.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541199012**
Client Sample ID: **MW−S01−04142021DUP**
Description: **Dissolved Ground Water**

Label: 541199012.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199013**
Client Sample ID: **MW−S27−04142021**
Description: **Ground Water**

Label: 541199013.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541199013.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199014**
Client Sample ID: **MW−S27−04142021**
Description: **Dissolved Ground Water**

Label: 541199014.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 541199014.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541199015**
Client Sample ID: **HA20−CMT−6I−04142021**
Description: **Ground Water**

Label: 541199015.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199015.01.01 **Type: New Undefined**

10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199016**
Client Sample ID: **HA20−CMT−6I−04142021**
Description: **Dissolved Ground Water**

Label: 541199016.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199016.01.01 **Type: New Undefined**

10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199017**
Client Sample ID: **HBPZ−2R−04142021**
Description: **Ground Water**

Label: 541199017.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to

Work Order Containers

Sample ID: **541199017**
Client Sample ID: **HBPZ−2R−04142021**
Description: **Ground Water**

Label: 541199017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199017.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199018**
Client Sample ID: **HBPZ−2R−04142021**
Description: **Dissolved Ground Water**

Label: 541199018.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199018.01.01	**Type: New Undefined**	
10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199019**
Client Sample ID: **HB−10−04142021**
Description: **Ground Water**

Label: 541199019.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541199019**
Client Sample ID: **HB−10−04142021**
Description: **Ground Water**

Label: 541199019.01.01 **Type: New Undefined**

10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541199020**
Client Sample ID: **HB−10−04142021**
Description: **Dissolved Ground Water**

Label: 541199020.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:21:24	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:51:40	Hannah Hatherly	Transfered custody to batch 2117229
22−APR−21 18:51:40	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:41:28	Hannah Hatherly	Changed batch_id from 2117229 to
22−APR−21 21:41:28	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541199020.01.01 **Type: New Undefined**

10−MAY−21 19:02:05	Paul Boyd	Transfered custody to batch 2117231
10−MAY−21 19:02:05	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 13 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541199

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batch:</u> 2117231

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2126999

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batch:</u> 2117229

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541199001	HB-10S-04142021
541199002	HB-10S-04142021
541199003	P-3-04142021
541199004	P-3-04142021
541199005	EQ Blank1-04122021
541199006	EQ Blank1-04122021
541199007	PW-6-04142021
541199008	PW-6-04142021
541199009	MW-S01-04142021
541199010	MW-S01-04142021
541199011	MW-S01-04142021DUP
541199012	MW-S01-04142021DUP
541199013	MW-S27-04142021
541199014	MW-S27-04142021
541199015	HA20-CMT-6I-04142021
541199016	HA20-CMT-6I-04142021
541199017	HBPZ-2R-04142021
541199018	HBPZ-2R-04142021
541199019	HB-10-04142021
541199020	HB-10-04142021
1204799694	Method Blank (MB)**ICP-MS**
1204799695	Laboratory Control Sample (LCS)
1204799698	541199001(HB-10S-04142021L) Serial Dilution (SD)
1204799696	541199001(HB-10S-04142021S) Matrix Spike (MS)
1204799697	541199001(HB-10S-04142021SD) Matrix Spike Duplicate (MSD)

Samples 541199001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements
The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. ICP-MS.

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541199017 (HBPZ-2R-04142021) and 541199018 (HBPZ-2R-04142021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541199	
	017	**018**
Uranium-235	10X	10X
Uranium-238	10X	10X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541199 GEL Work Order: 541199

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
** Indicates analyte is a surrogate compound.
J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name:** **Jamie Johnson**

Date: **14 MAY 2021** **Title:** **Group Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199001 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: HB-10S-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	63.0	ug/L		19.3	50.0	50.0	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-38-2	Arsenic	9.56	ug/L		2.00	5.00	5.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-39-3	Barium	31.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 05:59	210510-3	2117231
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:25	210512-6	2117231
7440-43-9	Cadmium	0.537	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-70-2	Calcium	10600	ug/L		80.0	200	200	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-48-4	Cobalt	27.3	ug/L		0.300	1.00	1.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-50-8	Copper	1.36	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7439-89-6	Iron	9900	ug/L		33.0	100	100	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7439-95-4	Magnesium	2700	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7439-96-5	Manganese	693	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7439-98-7	Molybdenum	2.33	ug/L		0.200	1.00	1.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-02-0	Nickel	4.49	ug/L		0.600	2.00	2.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-09-7	Potassium	3330	ug/L		80.0	300	300	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-23-5	Sodium	12800	ug/L		80.0	250	250	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-61-1	Total Uranium	0.266	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:04	210510-1	2117231
7440-61-1	Uranium-238	0.266	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:04	210510-1	2117231
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 23:23	210511-5	2117231
7440-66-6	Zinc	5.67	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 23:23	210511-5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199002 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: HB−10S−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−38−2	Arsenic	8.10	ug/L		2.00	5.00	5.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−39−3	Barium	31.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 06:17	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:34	210512−6	2117231
7440−43−9	Cadmium	0.499	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−70−2	Calcium	10300	ug/L		80.0	200	200	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−48−4	Cobalt	24.7	ug/L		0.300	1.00	1.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−50−8	Copper	0.800	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7439−89−6	Iron	8990	ug/L		33.0	100	100	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7439−95−4	Magnesium	2690	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7439−96−5	Manganese	655	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7439−98−7	Molybdenum	1.96	ug/L		0.200	1.00	1.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−02−0	Nickel	4.25	ug/L		0.600	2.00	2.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−09−7	Potassium	3290	ug/L		80.0	300	300	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−23−5	Sodium	12700	ug/L		80.0	250	250	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−61−1	Total Uranium	0.117	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:13	210510−1	2117231
7440−61−1	Uranium−238	0.117	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:13	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 23:41	210511−5	2117231
7440−66−6	Zinc	4.98	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 23:41	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199003 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: P−3−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−39−3	Barium	19.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 06:21	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:36	210512−6	2117231
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−70−2	Calcium	24200	ug/L		80.0	200	200	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7439−89−6	Iron	72.0	ug/L	J	33.0	100	100	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7439−95−4	Magnesium	6400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7439−98−7	Molybdenum	0.338	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−02−0	Nickel	1.26	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−09−7	Potassium	3420	ug/L		80.0	300	300	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−23−5	Sodium	33500	ug/L		80.0	250	250	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:15	210510−1	2117231
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:15	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 23:45	210511−5	2117231
7440−66−6	Zinc	74.9	ug/L		3.30	20.0	20.0	1	MS	PRB	05/11/21 23:45	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199004 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: P−3−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−39−3	Barium	18.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 06:32	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:42	210512−6	2117231
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−70−2	Calcium	23100	ug/L		80.0	200	200	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7439−95−4	Magnesium	5960	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7439−98−7	Molybdenum	0.337	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−02−0	Nickel	0.603	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−09−7	Potassium	3230	ug/L		80.0	300	300	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−23−5	Sodium	31900	ug/L		80.0	250	250	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:20	210510−1	2117231
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:20	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 23:56	210511−5	2117231
7440−66−6	Zinc	72.4	ug/L		3.30	20.0	20.0	1	MS	PRB	05/11/21 23:56	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199005 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: EQ Blank1−04122021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−39−3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	05/11/21 06:35	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:43	210512−6	2117231
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−70−2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7439−95−4	Magnesium	10.0	ug/L	U	10.0	30.0	30.0	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−09−7	Potassium	80.0	ug/L	U	80.0	300	300	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−23−5	Sodium	80.0	ug/L	U	80.0	250	250	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:22	210510−1	2117231
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:22	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 23:59	210511−5	2117231
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 23:59	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199006 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: EQ Blank1-04122021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-39-3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	05/11/21 06:39	210510-3	2117231
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:45	210512-6	2117231
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-70-2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7439-95-4	Magnesium	10.0	ug/L	U	10.0	30.0	30.0	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-02-0	Nickel	0.787	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-09-7	Potassium	80.0	ug/L	U	80.0	300	300	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-23-5	Sodium	80.0	ug/L	U	80.0	250	250	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:24	210510-1	2117231
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:24	210510-1	2117231
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:03	210511-5	2117231
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:03	210511-5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199007 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: PW-6-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-36-0	Antimony	1.02	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-39-3	Barium	32.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 06:43	210510-3	2117231
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:47	210512-6	2117231
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-70-2	Calcium	26100	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7439-89-6	Iron	4100	ug/L		33.0	100	100	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7439-92-1	Lead	4.93	ug/L		0.500	2.00	2.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7439-95-4	Magnesium	6160	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7439-96-5	Manganese	160	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-02-0	Nickel	0.891	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-09-7	Potassium	3200	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-23-5	Sodium	29500	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:26	210510-1	2117231
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:26	210510-1	2117231
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:06	210511-5	2117231
7440-66-6	Zinc	523	ug/L		3.30	20.0	20.0	1	MS	PRB	05/12/21 00:06	210511-5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199008 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: PW-6-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-39-3	Barium	31.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 06:46	210510-3	2117231
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:49	210512-6	2117231
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-70-2	Calcium	25400	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7439-89-6	Iron	3740	ug/L		33.0	100	100	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7439-92-1	Lead	2.30	ug/L		0.500	2.00	2.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7439-95-4	Magnesium	6040	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7439-96-5	Manganese	150	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7439-98-7	Molybdenum	0.207	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-02-0	Nickel	0.907	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-09-7	Potassium	3080	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-23-5	Sodium	29500	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:28	210510-1	2117231
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:28	210510-1	2117231
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:10	210511-5	2117231
7440-66-6	Zinc	495	ug/L		3.30	20.0	20.0	1	MS	PRB	05/12/21 00:10	210511-5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199009 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: MW-S01-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	103	ug/L		19.3	50.0	50.0	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-39-3	Barium	23.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 06:50	210510-3	2117231
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:51	210512-6	2117231
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-70-2	Calcium	16900	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-48-4	Cobalt	10.7	ug/L		0.300	1.00	1.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-50-8	Copper	9.82	ug/L		0.300	2.00	2.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7439-89-6	Iron	98.0	ug/L	J	33.0	100	100	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7439-95-4	Magnesium	4650	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7439-96-5	Manganese	5.51	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7439-98-7	Molybdenum	4.30	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-02-0	Nickel	3.49	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-09-7	Potassium	2590	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-23-5	Sodium	44800	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-61-1	Total Uranium	0.736	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:29	210510-1	2117231
7440-61-1	Uranium-238	0.736	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:29	210510-1	2117231
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:14	210511-5	2117231
7440-66-6	Zinc	3.71	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:14	210511-5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199010 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: MW-S01-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-39-3	Barium	21.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 06:53	210510-3	2117231
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:52	210512-6	2117231
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-70-2	Calcium	17000	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-48-4	Cobalt	10.5	ug/L		0.300	1.00	1.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-50-8	Copper	7.35	ug/L		0.300	2.00	2.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7439-95-4	Magnesium	4700	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7439-98-7	Molybdenum	4.26	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-02-0	Nickel	3.70	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-09-7	Potassium	2600	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-23-5	Sodium	45800	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-61-1	Total Uranium	0.319	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:31	210510-1	2117231
7440-61-1	Uranium-238	0.319	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:31	210510-1	2117231
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:17	210511-5	2117231
7440-66-6	Zinc	6.05	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:17	210511-5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199011 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: MW−S01−04142021DUP **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	152	ug/L		19.3	50.0	50.0	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−39−3	Barium	23.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 06:57	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:54	210512−6	2117231
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−70−2	Calcium	16900	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−48−4	Cobalt	10.8	ug/L		0.300	1.00	1.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−50−8	Copper	10.3	ug/L		0.300	2.00	2.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7439−89−6	Iron	145	ug/L		33.0	100	100	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7439−95−4	Magnesium	4760	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7439−96−5	Manganese	6.52	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7439−98−7	Molybdenum	4.61	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−02−0	Nickel	3.64	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−09−7	Potassium	2620	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−23−5	Sodium	44200	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−61−1	Total Uranium	0.795	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:33	210510−1	2117231
7440−61−1	Uranium−238	0.795	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:33	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:21	210511−5	2117231
7440−66−6	Zinc	4.23	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:21	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199012 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: MW−S01−04142021DUP **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−36−0	Antimony	1.06	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−39−3	Barium	21.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 07:08	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 17:56	210512−6	2117231
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−70−2	Calcium	16400	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−48−4	Cobalt	10.4	ug/L		0.300	1.00	1.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−50−8	Copper	7.26	ug/L		0.300	2.00	2.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7439−95−4	Magnesium	4570	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7439−98−7	Molybdenum	4.54	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−02−0	Nickel	3.62	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−09−7	Potassium	2520	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−23−5	Sodium	43600	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−61−1	Total Uranium	0.342	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:38	210510−1	2117231
7440−61−1	Uranium−238	0.342	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:38	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:32	210511−5	2117231
7440−66−6	Zinc	5.18	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:32	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199013 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: MW-S27-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	114	ug/L		19.3	50.0	50.0	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-36-0	Antimony	2.14	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-39-3	Barium	22.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 07:11	210510-3	2117231
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 18:01	210512-6	2117231
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-70-2	Calcium	22100	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-50-8	Copper	0.370	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7439-89-6	Iron	137	ug/L		33.0	100	100	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7439-95-4	Magnesium	5160	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7439-96-5	Manganese	11.3	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7439-98-7	Molybdenum	0.263	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-02-0	Nickel	1.22	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-09-7	Potassium	3400	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-23-5	Sodium	31900	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-61-1	Total Uranium	0.258	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:40	210510-1	2117231
7440-61-1	Uranium-238	0.258	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:40	210510-1	2117231
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:35	210511-5	2117231
7440-66-6	Zinc	5.31	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:35	210511-5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199014 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: MW−S27−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−36−0	Antimony	2.29	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−39−3	Barium	20.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 07:15	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 18:03	210512−6	2117231
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−70−2	Calcium	21500	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−50−8	Copper	0.412	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7439−95−4	Magnesium	4960	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7439−96−5	Manganese	2.38	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7439−98−7	Molybdenum	0.297	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−02−0	Nickel	1.09	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−09−7	Potassium	3270	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−23−5	Sodium	31800	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:42	210510−1	2117231
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:42	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:39	210511−5	2117231
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:39	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199015 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: HA20−CMT−6I−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	22.1	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−38−2	Arsenic	3.67	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−39−3	Barium	32.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 07:19	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 18:05	210512−6	2117231
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−70−2	Calcium	48600	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−48−4	Cobalt	0.567	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7439−89−6	Iron	864	ug/L		33.0	100	100	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7439−95−4	Magnesium	7240	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7439−96−5	Manganese	944	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7439−98−7	Molybdenum	42.2	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−09−7	Potassium	7940	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−23−5	Sodium	33300	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−61−1	Total Uranium	9.32	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0648	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:44	210510−1	2117231
7440−61−1	Uranium−238	9.25	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:44	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:42	210511−5	2117231
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:42	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199016 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: HA20-CMT-6I-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-38-2	Arsenic	3.72	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-39-3	Barium	31.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 07:22	210510-3	2117231
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 18:07	210512-6	2117231
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-70-2	Calcium	48300	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-48-4	Cobalt	0.578	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7439-89-6	Iron	837	ug/L		33.0	100	100	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7439-95-4	Magnesium	7190	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7439-96-5	Manganese	946	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7439-98-7	Molybdenum	42.0	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-02-0	Nickel	0.674	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-09-7	Potassium	7910	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-23-5	Sodium	33700	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-61-1	Total Uranium	9.12	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0605	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:45	210510-1	2117231
7440-61-1	Uranium-238	9.06	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:45	210510-1	2117231
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:46	210511-5	2117231
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:46	210511-5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199017 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: HBPZ−2R−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	29.9	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−39−3	Barium	3.00	ug/L	J	0.670	4.00	4.00	1	MS	PRB	05/11/21 07:26	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 18:09	210512−6	2117231
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−70−2	Calcium	17300	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−48−4	Cobalt	0.662	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−50−8	Copper	14.6	ug/L		0.300	2.00	2.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7439−89−6	Iron	36.4	ug/L	J	33.0	100	100	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7439−95−4	Magnesium	4990	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7439−96−5	Manganese	10.9	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7439−98−7	Molybdenum	407	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−02−0	Nickel	2.10	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−09−7	Potassium	2880	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−23−5	Sodium	20100	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−61−1	Total Uranium	889	ug/L		0.670	2.00	2.00			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	1.82	ug/L		0.100	0.700	0.700	10	MS	PRB	05/11/21 18:10	210511−4	2117231
7440−61−1	Uranium−238	887	ug/L		0.670	2.00	2.00	10	MS	PRB	05/11/21 18:10	210511−4	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:50	210511−5	2117231
7440−66−6	Zinc	4.20	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:50	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199018 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: HBPZ-2R-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-39-3	Barium	2.77	ug/L	J	0.670	4.00	4.00	1	MS	PRB	05/11/21 07:29	210510-3	2117231
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 18:10	210512-6	2117231
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-70-2	Calcium	16700	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-48-4	Cobalt	0.623	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-50-8	Copper	10.6	ug/L		0.300	2.00	2.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7439-95-4	Magnesium	4950	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7439-96-5	Manganese	9.72	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7439-98-7	Molybdenum	365	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-02-0	Nickel	2.01	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-09-7	Potassium	2780	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-23-5	Sodium	19800	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-61-1	Total Uranium	842	ug/L		0.670	2.00	2.00			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	1.74	ug/L		0.100	0.700	0.700	10	MS	PRB	05/11/21 18:12	210511-4	2117231
7440-61-1	Uranium-238	840	ug/L		0.670	2.00	2.00	10	MS	PRB	05/11/21 18:12	210511-4	2117231
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:53	210511-5	2117231
7440-66-6	Zinc	3.48	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:53	210511-5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199019 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: HB−10−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−36−0	Antimony	1.02	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−39−3	Barium	43.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 07:33	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 18:12	210512−6	2117231
7440−43−9	Cadmium	0.365	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−70−2	Calcium	17100	ug/L		80.0	200	200	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−48−4	Cobalt	10.2	ug/L		0.300	1.00	1.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−50−8	Copper	0.728	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7439−89−6	Iron	893	ug/L		33.0	100	100	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7439−95−4	Magnesium	4250	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7439−96−5	Manganese	491	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7439−98−7	Molybdenum	1.43	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−02−0	Nickel	2.09	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−09−7	Potassium	4010	ug/L		80.0	300	300	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−23−5	Sodium	21100	ug/L		80.0	250	250	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−61−1	Total Uranium	0.325	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:51	210510−1	2117231
7440−61−1	Uranium−238	0.325	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:51	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:57	210511−5	2117231
7440−66−6	Zinc	5.67	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 00:57	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541199 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541199020 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: HB−10−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−36−0	Antimony	1.08	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−39−3	Barium	45.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 07:37	210510−3	2117231
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 18:14	210512−6	2117231
7440−43−9	Cadmium	0.372	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−70−2	Calcium	17300	ug/L		80.0	200	200	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−48−4	Cobalt	10.5	ug/L		0.300	1.00	1.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−50−8	Copper	0.970	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7439−89−6	Iron	891	ug/L		33.0	100	100	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7439−95−4	Magnesium	4330	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7439−96−5	Manganese	494	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7439−98−7	Molybdenum	1.01	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−02−0	Nickel	2.46	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−09−7	Potassium	4140	ug/L		80.0	300	300	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−23−5	Sodium	21700	ug/L		80.0	250	250	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−61−1	Total Uranium	0.161	ug/L	J	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 21:53	210510−1	2117231
7440−61−1	Uranium−238	0.161	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/10/21 21:53	210510−1	2117231
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 01:00	210511−5	2117231
7440−66−6	Zinc	5.83	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 01:00	210511−5	2117231

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117231	2117229	SW846 3005A	50	mL	50	mL	04/23/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.1	90.0 − 110.0	MS	10−MAY−21 19:19	210510−1
	Uranium−238	51.3	ug/L	49.64	ug/L	103.3	90.0 − 110.0	MS	10−MAY−21 19:19	210510−1
	Barium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	11−MAY−21 04:04	210510−3
	Uranium−235	0.36	ug/L	0.36	ug/L	100.4	90.0 − 110.0	MS	11−MAY−21 17:48	210511−4
	Uranium−238	47.1	ug/L	49.64	ug/L	94.9	90.0 − 110.0	MS	11−MAY−21 17:48	210511−4
	Aluminum	5130	ug/L	5050	ug/L	101.5	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Antimony	52.9	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Arsenic	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Cadmium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Calcium	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Chromium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Cobalt	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Copper	52.7	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Iron	4920	ug/L	5000	ug/L	98.3	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Lead	46	ug/L	50	ug/L	92	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Magnesium	5100	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Manganese	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Molybdenum	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Nickel	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Potassium	5210	ug/L	5000	ug/L	104.2	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Selenium	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Silver	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Sodium	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Thallium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Thorium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Vanadium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Zinc	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	11−MAY−21 20:19	210511−5
	Beryllium	53	ug/L	50	ug/L	105.9	90.0 − 110.0	MS	12−MAY−21 15:32	210512−6
CCV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.6	90.0 − 110.0	MS	10−MAY−21 19:28	210510−1
	Uranium−238	51.7	ug/L	49.64	ug/L	104.2	90.0 − 110.0	MS	10−MAY−21 19:28	210510−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	11−MAY−21 04:22	210510−3
	Uranium−235	0.35	ug/L	0.36	ug/L	98	90.0 − 110.0	MS	11−MAY−21 17:57	210511−4
	Uranium−238	45.8	ug/L	49.64	ug/L	92.3	90.0 − 110.0	MS	11−MAY−21 17:57	210511−4
	Aluminum	5060	ug/L	5050	ug/L	100.1	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Antimony	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Arsenic	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Cadmium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Calcium	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Chromium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Cobalt	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Copper	52.3	ug/L	50	ug/L	104.6	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Lead	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Magnesium	5100	ug/L	5000	ug/L	102.1	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Manganese	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Molybdenum	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Nickel	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Potassium	5200	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Selenium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Silver	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Sodium	5090	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Thallium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Thorium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Vanadium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Zinc	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 20:37	210511−5
	Beryllium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	12−MAY−21 15:41	210512−6
CCV02										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.2	90.0 − 110.0	MS	10−MAY−21 20:57	210510−1
	Uranium−238	52	ug/L	49.64	ug/L	104.8	90.0 − 110.0	MS	10−MAY−21 20:57	210510−1
	Barium	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 04:33	210510−3
	Uranium−235	0.36	ug/L	0.36	ug/L	99.2	90.0 − 110.0	MS	11−MAY−21 18:14	210511−4

METALS
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Initial and Continuing Calibration Verification

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Uranium−238	46.1	ug/L	49.64	ug/L	92.9	90.0 − 110.0	MS	11−MAY−21 18:14	210511−4
	Aluminum	5060	ug/L	5050	ug/L	100.3	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Antimony	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Arsenic	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Cadmium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Calcium	5100	ug/L	5000	ug/L	102.1	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Chromium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Cobalt	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Copper	51.9	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Iron	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Lead	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Magnesium	5040	ug/L	5000	ug/L	100.8	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Manganese	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Molybdenum	52.2	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Nickel	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Potassium	5190	ug/L	5000	ug/L	103.8	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Selenium	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Silver	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Sodium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Thallium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Thorium	54.9	ug/L	50	ug/L	109.8	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Vanadium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Zinc	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	11−MAY−21 20:48	210511−5
	Beryllium	47.2	ug/L	50	ug/L	94.4	90.0 − 110.0	MS	12−MAY−21 17:18	210512−6
CCV03										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.4	90.0 − 110.0	MS	10−MAY−21 21:17	210510−1
	Uranium−238	52.3	ug/L	49.64	ug/L	105.3	90.0 − 110.0	MS	10−MAY−21 21:17	210510−1
	Barium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	11−MAY−21 05:45	210510−3
	Aluminum	4940	ug/L	5050	ug/L	97.9	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Antimony	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Arsenic	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5

METALS
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Initial and Continuing Calibration Verification

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cadmium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Chromium	48.6	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Cobalt	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Copper	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Iron	4840	ug/L	5000	ug/L	96.8	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Lead	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Magnesium	4830	ug/L	5000	ug/L	96.6	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Manganese	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Molybdenum	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Nickel	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Potassium	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Selenium	52.5	ug/L	50	ug/L	105	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Silver	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Sodium	4730	ug/L	5000	ug/L	94.7	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Thorium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Vanadium	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Zinc	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	11−MAY−21 23:09	210511−5
	Beryllium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	12−MAY−21 17:38	210512−6
CCV04										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 21:35	210510−1
	Uranium−238	51.6	ug/L	49.64	ug/L	104	90.0 − 110.0	MS	10−MAY−21 21:35	210510−1
	Barium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	11−MAY−21 06:25	210510−3
	Aluminum	4910	ug/L	5050	ug/L	97.3	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Antimony	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Arsenic	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Cadmium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Calcium	4950	ug/L	5000	ug/L	98.9	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Chromium	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Cobalt	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5

METALS
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Initial and Continuing Calibration Verification

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Copper	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Iron	4910	ug/L	5000	ug/L	98.1	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Lead	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Magnesium	4800	ug/L	5000	ug/L	96.1	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Manganese	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Molybdenum	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Nickel	48.8	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Potassium	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Selenium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Silver	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Sodium	4700	ug/L	5000	ug/L	94.1	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Thallium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Thorium	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Vanadium	47	ug/L	50	ug/L	94	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Zinc	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	11−MAY−21 23:48	210511−5
	Beryllium	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	12−MAY−21 17:58	210512−6
CCV05										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.4	90.0 − 110.0	MS	10−MAY−21 21:54	210510−1
	Uranium−238	51.2	ug/L	49.64	ug/L	103.2	90.0 − 110.0	MS	10−MAY−21 21:54	210510−1
	Barium	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	11−MAY−21 07:01	210510−3
	Aluminum	4960	ug/L	5050	ug/L	98.1	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Antimony	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Arsenic	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Cadmium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Calcium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Chromium	47.6	ug/L	50	ug/L	95.3	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Cobalt	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Copper	49.5	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Iron	4890	ug/L	5000	ug/L	97.9	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Lead	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Magnesium	4840	ug/L	5000	ug/L	96.8	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5

METALS
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Initial and Continuing Calibration Verification

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Manganese	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Molybdenum	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Nickel	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Potassium	5050	ug/L	5000	ug/L	101	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Selenium	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Silver	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Sodium	4680	ug/L	5000	ug/L	93.6	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Thallium	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Thorium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Vanadium	47.7	ug/L	50	ug/L	95.3	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Zinc	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	12−MAY−21 00:24	210511−5
	Beryllium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	12−MAY−21 18:16	210512−6
CCV06										
	Barium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	11−MAY−21 07:40	210510−3
	Aluminum	4820	ug/L	5050	ug/L	95.4	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Antimony	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Arsenic	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Cadmium	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Calcium	4970	ug/L	5000	ug/L	99.3	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Chromium	46.8	ug/L	50	ug/L	93.7	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Cobalt	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Copper	47.5	ug/L	50	ug/L	95.1	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Iron	4850	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Lead	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Magnesium	4690	ug/L	5000	ug/L	93.7	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Manganese	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Molybdenum	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Nickel	47.5	ug/L	50	ug/L	95.1	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Potassium	5030	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Selenium	52.2	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Silver	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Sodium	4510	ug/L	5000	ug/L	90.1	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Thallium	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Thorium	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Vanadium	47.1	ug/L	50	ug/L	94.1	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5
	Zinc	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	12−MAY−21 01:04	210511−5

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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CRDL Standard for ICP & ICPMS

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0014	ug/L	.0014	ug/L	100	80.0 − 120.0	MS	10−MAY−21 19:23	210510−1
	Uranium−238	.21	ug/L	.2	ug/L	104.9	80.0 − 120.0	MS	10−MAY−21 19:23	210510−1
	Barium	4.11	ug/L	4	ug/L	102.7	80.0 − 120.0	MS	11−MAY−21 04:11	210510−3
	Uranium−235	.0015	ug/L	.0014	ug/L	107.1	80.0 − 120.0	MS	11−MAY−21 17:52	210511−4
	Uranium−238	.186	ug/L	.2	ug/L	93.2	80.0 − 120.0	MS	11−MAY−21 17:52	210511−4
	Aluminum	51	ug/L	50	ug/L	102.1	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Antimony	3.09	ug/L	3	ug/L	103.1	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Arsenic	4.73	ug/L	5	ug/L	94.5	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Cadmium	.964	ug/L	1	ug/L	96.4	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Calcium	257	ug/L	200	ug/L	128.6	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Chromium	10.1	ug/L	10	ug/L	101	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Cobalt	1.03	ug/L	1	ug/L	102.5	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Copper	2.13	ug/L	2	ug/L	106.7	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Iron	103	ug/L	100	ug/L	103.3	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Lead	2.11	ug/L	2	ug/L	105.6	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Magnesium	32.2	ug/L	30	ug/L	107.3	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Manganese	5.1	ug/L	5	ug/L	102	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Molybdenum	1.04	ug/L	1	ug/L	103.7	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Nickel	2.06	ug/L	2	ug/L	103	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Potassium	315	ug/L	300	ug/L	104.9	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Selenium	4.89	ug/L	5	ug/L	97.8	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Silver	1	ug/L	1	ug/L	100.4	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Sodium	264	ug/L	250	ug/L	105.5	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Thallium	2.06	ug/L	2	ug/L	102.8	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Thorium	2.18	ug/L	2	ug/L	108.8	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Vanadium	20.1	ug/L	20	ug/L	100.5	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Zinc	20.4	ug/L	20	ug/L	102	80.0 − 120.0	MS	11−MAY−21 20:26	210511−5
	Beryllium	.534	ug/L	.5	ug/L	106.8	80.0 − 120.0	MS	12−MAY−21 15:35	210512−6

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541199

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	10−MAY−21 19:21	210510−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	10−MAY−21 19:21	210510−1
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	11−MAY−21 04:08	210510−3
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	11−MAY−21 17:50	210511−4
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	11−MAY−21 17:50	210511−4
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	11−MAY−21 20:23	210511−5
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	11−MAY−21 20:23	210511−5
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	11−MAY−21 20:23	210511−5
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	11−MAY−21 20:23	210511−5
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	11−MAY−21 20:23	210511−5
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	12−MAY−21 15:34	210512−6
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 19:30	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 19:30	210510−1

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Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541199

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 04:26	210510−3
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	11−MAY−21 17:59	210511−4
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	11−MAY−21 17:59	210511−4
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 20:41	210511−5
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 20:41	210511−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Molybdenum	0.71	+/−1	J	0.2	1.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	11−MAY−21 20:41	210511−5
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 20:41	210511−5
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 20:41	210511−5
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 15:43	210512−6
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 20:59	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 20:59	210510−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 04:36	210510−3
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	11−MAY−21 18:16	210511−4

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541199

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	11−MAY−21 18:16	210511−4
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 20:52	210511−5
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 20:52	210511−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Molybdenum	0.54	+/−1	J	0.2	1.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	11−MAY−21 20:52	210511−5
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 20:52	210511−5
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 20:52	210511−5
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 17:20	210512−6
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 21:19	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 21:19	210510−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 05:48	210510−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 23:12	210511−5

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541199

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 23:12	210511−5
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 23:12	210511−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	11−MAY−21 23:12	210511−5
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 23:12	210511−5
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 23:12	210511−5
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 17:40	210512−6
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 21:37	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 21:37	210510−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 06:28	210510−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 23:52	210511−5
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 23:52	210511−5

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541199

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 23:52	210511−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	11−MAY−21 23:52	210511−5
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 23:52	210511−5
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 23:52	210511−5
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 18:00	210512−6
CCB05	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 21:56	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 21:56	210510−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 07:04	210510−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	12−MAY−21 00:28	210511−5
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	12−MAY−21 00:28	210511−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	12−MAY−21 00:28	210511−5

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541199

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	12−MAY−21 00:28	210511−5
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	12−MAY−21 00:28	210511−5
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 00:28	210511−5
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 18:18	210512−6
CCB06										
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 07:44	210510−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	12−MAY−21 01:08	210511−5
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	12−MAY−21 01:08	210511−5
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	12−MAY−21 01:08	210511−5
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 01:08	210511−5

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541199

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	12−MAY−21 01:08	210511−5
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 01:08	210511−5
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 01:08	210511−5

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541199
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204799694								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−4−
Interference Check Sample

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0001	ug/L					10−MAY−21 19:25	210510−1
	Uranium−238	0.035	ug/L					10−MAY−21 19:25	210510−1
ICSAB01									
	Uranium−235	0.14	ug/L	.145	ug/L	96.8	80.0 − 120.0	10−MAY−21 19:26	210510−1
	Uranium−238	19.9	ug/L	19.86	ug/L	100	80.0 − 120.0	10−MAY−21 19:26	210510−1

METALS
−4−
Interference Check Sample

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Barium	2.59	ug/L					11−MAY−21 04:15	210510−3
ICSAB01									
	Barium	21.7	ug/L	22.35	ug/L	97.2	80.0 − 120.0	11−MAY−21 04:18	210510−3

METALS
−4−
Interference Check Sample

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0003	ug/L					11−MAY−21 17:54	210511−4
	Uranium−238	0.02	ug/L					11−MAY−21 17:54	210511−4
ICSAB01									
	Uranium−235	0.137	ug/L	.145	ug/L	94.8	80.0 − 120.0	11−MAY−21 17:56	210511−4
	Uranium−238	18.0	ug/L	19.86	ug/L	90.4	80.0 − 120.0	11−MAY−21 17:56	210511−4

METALS
−4−
Interference Check Sample

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	94100	ug/L	100000	ug/L	94.1	80.0 − 120.0	11−MAY−21 20:30	210511−5
	Antimony	0.092	ug/L					11−MAY−21 20:30	210511−5
	Arsenic	0.172	ug/L					11−MAY−21 20:30	210511−5
	Cadmium	0.943	ug/L					11−MAY−21 20:30	210511−5
	Calcium	93800	ug/L	100000	ug/L	93.8	80.0 − 120.0	11−MAY−21 20:30	210511−5
	Chromium	0.72	ug/L					11−MAY−21 20:30	210511−5
	Cobalt	0.464	ug/L					11−MAY−21 20:30	210511−5
	Copper	0.13	ug/L					11−MAY−21 20:30	210511−5
	Iron	90500	ug/L	100000	ug/L	90.5	80.0 − 120.0	11−MAY−21 20:30	210511−5
	Lead	0.18	ug/L					11−MAY−21 20:30	210511−5
	Magnesium	88300	ug/L	100000	ug/L	88.3	80.0 − 120.0	11−MAY−21 20:30	210511−5
	Manganese	7.02	ug/L					11−MAY−21 20:30	210511−5
	Molybdenum	2150	ug/L	2000	ug/L	108	80.0 − 120.0	11−MAY−21 20:30	210511−5
	Nickel	0.281	ug/L					11−MAY−21 20:30	210511−5
	Potassium	103000	ug/L	100000	ug/L	103	80.0 − 120.0	11−MAY−21 20:30	210511−5
	Selenium	0.515	ug/L					11−MAY−21 20:30	210511−5
	Silver	0.072	ug/L					11−MAY−21 20:30	210511−5
	Sodium	95400	ug/L	100000	ug/L	95.5	80.0 − 120.0	11−MAY−21 20:30	210511−5
	Thallium	0.083	ug/L					11−MAY−21 20:30	210511−5
	Thorium	2.08	ug/L					11−MAY−21 20:30	210511−5
	Vanadium	−0.281	ug/L					11−MAY−21 20:30	210511−5
	Zinc	1.17	ug/L					11−MAY−21 20:30	210511−5
ICSAB01									
	Aluminum	94200	ug/L	100000	ug/L	94.2	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Antimony	21.0	ug/L	20	ug/L	105	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Arsenic	20.8	ug/L	20	ug/L	104	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Cadmium	19.7	ug/L	20.72	ug/L	94.9	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Calcium	93900	ug/L	100000	ug/L	93.9	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Chromium	19.6	ug/L	20	ug/L	97.8	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Cobalt	19.0	ug/L	20.65	ug/L	91.8	80.0 − 120.0	11−MAY−21 20:34	210511−5

METALS
−4−
Interference Check Sample

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Copper	16.4	ug/L	20	ug/L	82	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Iron	89900	ug/L	100000	ug/L	89.9	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Lead	18.2	ug/L	20	ug/L	91.1	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Magnesium	86900	ug/L	100000	ug/L	86.9	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Manganese	26.3	ug/L	25.72	ug/L	102	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Molybdenum	2120	ug/L	2000	ug/L	106	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Nickel	17.8	ug/L	20	ug/L	88.8	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Potassium	100000	ug/L	100000	ug/L	101	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Selenium	21.6	ug/L	20	ug/L	108	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Silver	17.8	ug/L	20	ug/L	89.1	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Sodium	94200	ug/L	100000	ug/L	94.3	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Thallium	17.9	ug/L	20	ug/L	89.6	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Thorium	22.1	ug/L	20	ug/L	111	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Vanadium	19.3	ug/L	20	ug/L	96.7	80.0 − 120.0	11−MAY−21 20:34	210511−5
	Zinc	18.9	ug/L	20	ug/L	94.4	80.0 − 120.0	11−MAY−21 20:34	210511−5

METALS
−4−
Interference Check Sample

SDG No: 541199

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.015	ug/L					12−MAY−21 15:37	210512−6
ICSAB01									
	Beryllium	18.9	ug/L	20	ug/L	94.5	80.0 − 120.0	12−MAY−21 15:39	210512−6

METALS
−5a−

Matrix Spike Summary

SDG NO. 541199 **Client ID** HB−10S−04142021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541199001 **Spike ID:** 1204799696

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Copper	ug/L	75−125	48.5		1.36	J	50.0	94.2		MS
Iron	ug/L		11600		9900		2000	86.9	N/A	MS
Lead	ug/L	75−125	52.3		0.500	U	50.0	104		MS
Magnesium	ug/L	75−125	4660		2700		2000	97.9		MS
Manganese	ug/L		727		693		50.0	67.2	N/A	MS
Molybdenum	ug/L	75−125	54.9		2.33		50.0	105		MS
Nickel	ug/L	75−125	51.4		4.49		50.0	93.8		MS
Potassium	ug/L	75−125	5320		3330		2000	99.6		MS
Selenium	ug/L	75−125	50.8		2.00	U	50.0	101		MS
Silver	ug/L	75−125	51.0		0.300	U	50.0	102		MS
Sodium	ug/L		14300		12800		2000	72.9	N/A	MS
Thallium	ug/L	75−125	50.8		0.600	U	50.0	101		MS
Thorium	ug/L	75−125	53.9		0.700	U	50.0	107		MS
Uranium−235	ug/L	75−125	0.356		0.0100	U	0.360	98.3		MS
Uranium−238	ug/L	75−125	51.7		0.266		49.6	104		MS
Vanadium	ug/L	75−125	50.2		3.30	U	50.0	95.7		MS
Zinc	ug/L	75−125	51.8		5.67	J	50.0	92.3		MS
Aluminum	ug/L	75−125	2120		63.0		2000	103		MS
Antimony	ug/L	75−125	54.7		1.00	U	50.0	107		MS
Arsenic	ug/L	75−125	57.2		9.56		50.0	95.3		MS
Barium	ug/L	75−125	80.5		31.5		50.0	98		MS
Beryllium	ug/L	75−125	53.5		0.200	U	50.0	107		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 541199 **Client ID** HB−10S−04142021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541199001 **Spike ID:** 1204799696

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Cadmium	ug/L	75−125	50.5		0.537	J	50.0	100		MS
Calcium	ug/L		12600		10600		2000	95.8	N/A	MS
Chromium	ug/L	75−125	48.4		3.00	U	50.0	94		MS
Cobalt	ug/L	75−125	75.2		27.3		50.0	95.9		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 541199 **Client ID** HB−10S−04142021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541199001 **Spike ID:** 1204799697

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Cobalt	ug/L	75−125	73.5		27.3		50.0	92.5		MS
Copper	ug/L	75−125	48.5		1.36	J	50.0	94.2		MS
Iron	ug/L		11600		9900		2000	85.6	N/A	MS
Lead	ug/L	75−125	51.3		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	4660		2700		2000	98.1		MS
Manganese	ug/L		729		693		50.0	72.3	N/A	MS
Molybdenum	ug/L	75−125	56.7		2.33		50.0	109		MS
Nickel	ug/L	75−125	51.2		4.49		50.0	93.4		MS
Potassium	ug/L	75−125	5310		3330		2000	98.7		MS
Selenium	ug/L	75−125	50.7		2.00	U	50.0	100		MS
Silver	ug/L	75−125	52.5		0.300	U	50.0	105		MS
Sodium	ug/L		14300		12800		2000	73.5	N/A	MS
Thallium	ug/L	75−125	50.9		0.600	U	50.0	101		MS
Thorium	ug/L	75−125	53.2		0.700	U	50.0	106		MS
Uranium−235	ug/L	75−125	0.352		0.0100	U	0.360	97.2		MS
Uranium−238	ug/L	75−125	51.8		0.266		49.6	104		MS
Vanadium	ug/L	75−125	50.2		3.30	U	50.0	95.8		MS
Zinc	ug/L	75−125	53.0		5.67	J	50.0	94.7		MS
Aluminum	ug/L	75−125	2130		63.0		2000	103		MS
Antimony	ug/L	75−125	55.5		1.00	U	50.0	109		MS
Arsenic	ug/L	75−125	56.8		9.56		50.0	94.4		MS
Barium	ug/L	75−125	81.1		31.5		50.0	99.2		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 541199 **Client ID** HB−10S−04142021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541199001 **Spike ID:** 1204799697

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Beryllium	ug/L	75−125	54.0		0.200	U	50.0	108		MS
Cadmium	ug/L	75−125	51.8		0.537	J	50.0	103		MS
Calcium	ug/L		12300		10600		2000	82.9	N/A	MS
Chromium	ug/L	75−125	48.7		3.00	U	50.0	94.5		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 541199 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HB-10S-04142021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799696 **Duplicate ID:** 1204799697 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/-20	2120		2130		.299		MS
Antimony	ug/L	+/-20	54.7		55.5		1.43		MS
Arsenic	ug/L	+/-20	57.2		56.8		.793		MS
Barium	ug/L	+/-20	80.5		81.1		.741		MS
Beryllium	ug/L	+/-20	53.5		54.0		.921		MS
Cadmium	ug/L	+/-20	50.5		51.8		2.48		MS
Calcium	ug/L	+/-20	12600		12300		2.07		MS
Chromium	ug/L	+/-20	48.4		48.7		.505		MS
Cobalt	ug/L	+/-20	75.2		73.5		2.33		MS
Copper	ug/L	+/-20	48.5		48.5		.0186		MS
Iron	ug/L	+/-20	11600		11600		.219		MS
Lead	ug/L	+/-20	52.3		51.3		2.03		MS
Magnesium	ug/L	+/-20	4660		4660		.0515		MS
Manganese	ug/L	+/-20	727		729		.351		MS
Molybdenum	ug/L	+/-20	54.9		56.7		3.12		MS
Nickel	ug/L	+/-20	51.4		51.2		.31		MS
Potassium	ug/L	+/-20	5320		5310		.331		MS
Selenium	ug/L	+/-20	50.8		50.7		.372		MS
Silver	ug/L	+/-20	51.0		52.5		2.78		MS
Sodium	ug/L	+/-20	14300		14300		.0842		MS
Thallium	ug/L	+/-20	50.8		50.9		.259		MS
Thorium	ug/L	+/-20	53.9		53.2		1.36		MS
Uranium-235	ug/L	+/-20	0.356		0.352		1.16		MS
Uranium-238	ug/L	+/-20	51.7		51.8		.242		MS
Vanadium	ug/L	+/-20	50.2		50.2		.0618		MS
Zinc	ug/L	+/-20	51.8		53.0		2.29		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 541199 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HB−10S−04142021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799696 **Duplicate ID:** 1204799697 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 541199

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799695								
	Aluminum	ug/L	2000	2100		105	80−120	MS
	Antimony	ug/L	50.0	52.7		105	80−120	MS
	Arsenic	ug/L	50.0	47.6		95.2	80−120	MS
	Barium	ug/L	50.0	51.0		102	80−120	MS
	Beryllium	ug/L	50.0	52.2		104	80−120	MS
	Cadmium	ug/L	50.0	49.6		99.2	80−120	MS
	Calcium	ug/L	2000	2190		109	80−120	MS
	Chromium	ug/L	50.0	47.0		94	80−120	MS
	Cobalt	ug/L	50.0	47.9		95.7	80−120	MS
	Copper	ug/L	50.0	48.1		96.2	80−120	MS
	Iron	ug/L	2000	1940		97	80−120	MS
	Lead	ug/L	50.0	53.0		106	80−120	MS
	Magnesium	ug/L	2000	2090		105	80−120	MS
	Manganese	ug/L	50.0	49.0		98	80−120	MS
	Molybdenum	ug/L	50.0	51.4		103	80−120	MS
	Nickel	ug/L	50.0	48.6		97.2	80−120	MS
	Potassium	ug/L	2000	2100		105	80−120	MS
	Selenium	ug/L	50.0	50.7		101	80−120	MS
	Silver	ug/L	50.0	51.7		103	80−120	MS
	Sodium	ug/L	2000	2070		104	80−120	MS
	Thallium	ug/L	50.0	51.1		102	80−120	MS
	Thorium	ug/L	50.0	52.6		105	80−120	MS
	Uranium−235	ug/L	0.360	0.354		98.2	80−120	MS
	Uranium−238	ug/L	49.6	49.9		101	80−120	MS
	Vanadium	ug/L	50.0	48.5		96.9	80−120	MS
	Zinc	ug/L	50.0	49.1		98.3	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541199 **Client ID** HB−10S−04142021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541199001 **Serial Dilution ID:** 1204799698

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	63		96.5	U	7.326			MS
Antimony	1	U	5	U				MS
Arsenic	9.56		10	U	1.924			MS
Barium	31.5		31.1		1.478			MS
Beryllium	.2	U	1	U				MS
Cadmium	.537	J	1.5	U	7.821			MS
Calcium	10600		10300		3.564		20	MS
Chromium	3	U	15	U				MS
Cobalt	27.3		27.8		2.042		20	MS
Copper	1.36	J	1.5	U	8.297			MS
Iron	9900		10100		1.981		20	MS
Lead	.5	U	2.5	U				MS
Magnesium	2700		2650		1.845		20	MS
Manganese	693		693		.027		20	MS
Molybdenum	2.33		2.69	J	15.187			MS
Nickel	4.49		4.59	J	2.341			MS
Potassium	3330		3240		2.734			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	12800		12400		3.706		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.266		.335	U	17.061			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	5.67	J	16.5	U	51.569			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 541199 **Client ID:** HB-10S-04142021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541199001 **Serial Dilution ID:** 1204799698

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 541199 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2117229							
1204799694	MB for batch 2117229	MB	G	23−APR−21	50mL	50mL	
1204799695	LCS for batch 2117229	LCS	G	23−APR−21	50mL	50mL	
1204799696	HB−10S−04142021S	MS	G	23−APR−21	50mL	50mL	
1204799697	HB−10S−04142021SD	MSD	G	23−APR−21	50mL	50mL	
541199001	HB−10S−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199002	HB−10S−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199003	P−3−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199004	P−3−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199005	EQ Blank1−04122021	SAMPLE	G	23−APR−21	50mL	50mL	
541199006	EQ Blank1−04122021	SAMPLE	G	23−APR−21	50mL	50mL	
541199007	PW−6−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199008	PW−6−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199009	MW−S01−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199010	MW−S01−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199011	MW−S01−04142021DUP	SAMPLE	G	23−APR−21	50mL	50mL	
541199012	MW−S01−04142021DUP	SAMPLE	G	23−APR−21	50mL	50mL	
541199013	MW−S27−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199014	MW−S27−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199015	HA20−CMT−6I−04142021	SAMPLE	G	23−APR−21	50mL	50mL	

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 541199 **Method Type**: MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
541199016	HA20−CMT−6I−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199017	HBPZ−2R−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199018	HBPZ−2R−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199019	HB−10−04142021	SAMPLE	G	23−APR−21	50mL	50mL	
541199020	HB−10−04142021	SAMPLE	G	23−APR−21	50mL	50mL	

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541199

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:14:19																							X	X		
S10	1	19:16:06																							X	X		
S100	1	19:17:52																							X	X		
ICV01	1	19:19:39																							X	X		
ICB01	1	19:21:26																							X	X		
CRDL01	1	19:23:14																							X	X		
ICSA01	1	19:25:01																							X	X		
ICSAB01	1	19:26:50																							X	X		
CCV01	1	19:28:37																							X	X		
CCB01	1	19:30:24																							X	X		
ZZZZZZ	1	19:32:12																										
ZZZZZZ	1	19:33:59																										
ZZZZZZ	1	19:35:45																										
ZZZZZZ	1	19:37:32																										
ZZZZZZ	1	19:39:19																										
ZZZZZZ	1	19:41:06																										
ZZZZZZ	1	19:42:52																										
ZZZZZZ	1	19:44:39																										
ZZZZZZ	5	19:46:26																										
CCV	1	19:48:14																							X	X		
CCB	1	19:50:02																							X	X		
ZZZZZZ	1	19:51:49																										
ZZZZZZ	1	19:53:36																										
ZZZZZZ	1	19:55:22																										
ZZZZZZ	1	19:57:09																										
ZZZZZZ	5	19:58:56																										
ZZZZZZ	1	20:00:43																										
ZZZZZZ	1	20:02:30																										
CCV	1	20:04:17																							X	X		
CCB	1	20:06:05																							X	X		
ZZZZZZ	1	20:07:52																										
ZZZZZZ	1	20:09:39																										
ZZZZZZ	1	20:11:26																										
ZZZZZZ	1	20:13:13																										
ZZZZZZ	1	20:15:00																										
ZZZZZZ	1	20:16:46																										
ZZZZZZ	1	20:18:33																										
ZZZZZZ	1	20:20:20																										
CCV	1	20:22:07																							X	X		
CCB	1	20:23:55																							X	X		
ZZZZZZ	1	20:25:43																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541199

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZZ	1	20:27:30																										
ZZZZZZZ	1	20:29:16																										
ZZZZZZZ	1	20:31:03																										
ZZZZZZZ	1	20:32:50																										
ZZZZZZZ	1	20:34:37																										
ZZZZZZZ	1	20:36:24																										
ZZZZZZZ	1	20:38:10																										
CCV	1	20:39:58																							X	X		
CCB	1	20:41:45																							X	X		
ZZZZZZZ	1	20:43:32																										
ZZZZZZZ	1	20:45:19																										
ZZZZZZZ	1	20:47:05																										
ZZZZZZZ	1	20:48:51																										
ZZZZZZZ	1	20:50:38																										
ZZZZZZZ	1	20:52:25																										
ZZZZZZZ	1	20:54:12																										
ZZZZZZZ	5	20:55:59																										
CCV02	1	20:57:45																							X	X		
CCB02	1	20:59:33																							X	X		
1204799694	1	21:01:20																							X	X		
1204799695	1	21:03:06																							X	X		
541199001	1	21:04:53																							X	X		
1204799696	1	21:06:40																							X	X		
1204799697	1	21:08:26																							X	X		
ZZZZZZZ	1	21:10:13																										
1204799698	5	21:12:00																							X	X		
541199002	1	21:13:46																							X	X		
541199003	1	21:15:33																							X	X		
CCV03	1	21:17:21																							X	X		
CCB03	1	21:19:09																							X	X		
541199004	1	21:20:57																							X	X		
541199005	1	21:22:44																							X	X		
541199006	1	21:24:30																							X	X		
541199007	1	21:26:17																							X	X		
541199008	1	21:28:04																							X	X		
541199009	1	21:29:51																							X	X		
541199010	1	21:31:38																							X	X		
541199011	1	21:33:24																							X	X		
CCV04	1	21:35:13																							X	X		
CCB04	1	21:37:00																							X	X		
541199012	1	21:38:48																							X	X		

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541199

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 10-MAY-21

End Date: 11-MAY-21

Data File: 210510-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541199013	1	21:40:35																							X	X		
541199014	1	21:42:22																							X	X		
541199015	1	21:44:09																							X	X		
541199016	1	21:45:56																							X	X		
ZZZZZZ	1	21:47:42																										
ZZZZZZ	1	21:49:29																										
541199019	1	21:51:16																							X	X		
541199020	1	21:53:03																							X	X		
CCV05	1	21:54:50																							X	X		
CCB05	1	21:56:38																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541199

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	03:53:38				X																						
S10	1	03:57:15				X																						
S100	1	04:00:51				X																						
ICV01	1	04:04:28				X																						
ICB01	1	04:08:04				X																						
CRDL01	1	04:11:41				X																						
ICSA01	1	04:15:18				X																						
ICSAB01	1	04:18:54				X																						
CCV01	1	04:22:31				X																						
CCB01	1	04:26:07				X																						
LR01	1	04:29:44				X																						
CCV02	1	04:33:21				X																						
CCB02	1	04:36:58				X																						
ZZZZZZ	1	04:40:34																										
ZZZZZZ	1	04:44:10																										
ZZZZZZ	1	04:47:46																										
ZZZZZZ	1	04:51:22																										
ZZZZZZ	1	04:54:57																										
ZZZZZZ	1	04:58:33																										
ZZZZZZ	1	05:02:09																										
ZZZZZZ	1	05:05:45																										
CCV	1	05:09:21				X																						
CCB	1	05:12:58				X																						
ZZZZZZ	1	05:16:34																										
ZZZZZZ	1	05:20:10																										
ZZZZZZ	1	05:23:46																										
ZZZZZZ	1	05:27:22																										
ZZZZZZ	1	05:30:58																										
ZZZZZZ	1	05:34:33																										
ZZZZZZ	1	05:38:09																										
ZZZZZZ	5	05:41:45																										
CCV03	1	05:45:21				X																						
CCB03	1	05:48:59				X																						
1204799694	1	05:52:36				X																						
1204799695	1	05:56:12				X																						
541199001	1	05:59:47				X																						
1204799696	1	06:03:23				X																						
1204799697	1	06:06:59				X																						
ZZZZZZ	1	06:10:36																										
1204799698	5	06:14:12				X																						
541199002	1	06:17:49				X																						

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541199

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541199003	1	06:21:25				X																						
CCV04	1	06:25:03				X																						
CCB04	1	06:28:39				X																						
541199004	1	06:32:16				X																						
541199005	1	06:35:53				X																						
541199006	1	06:39:30				X																						
541199007	1	06:43:06				X																						
541199008	1	06:46:42				X																						
541199009	1	06:50:18				X																						
541199010	1	06:53:54				X																						
541199011	1	06:57:30				X																						
CCV05	1	07:01:07				X																						
CCB05	1	07:04:43				X																						
541199012	1	07:08:21				X																						
541199013	1	07:11:56				X																						
541199014	1	07:15:33				X																						
541199015	1	07:19:09				X																						
541199016	1	07:22:45				X																						
541199017	1	07:26:21				X																						
541199018	1	07:29:57				X																						
541199019	1	07:33:34				X																						
541199020	1	07:37:09				X																						
CCV06	1	07:40:45				X																						
CCB06	1	07:44:22				X																						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541199

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 11-MAY-21 **End Date:** 12-MAY-21 **Data File:** 210511-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	17:43:32																							X	X		
S10	1	17:45:18																							X	X		
S100	1	17:47:05																							X	X		
ICV01	1	17:48:52																							X	X		
ICB01	1	17:50:39																							X	X		
CRDL01	1	17:52:25																							X	X		
ICSA01	1	17:54:13																							X	X		
ICSAB01	1	17:56:01																							X	X		
CCV01	1	17:57:49																							X	X		
CCB01	1	17:59:36																							X	X		
ZZZZZZ	1	18:01:23																										
ZZZZZZ	1	18:03:10																										
ZZZZZZ	10	18:04:58																										
ZZZZZZ	10	18:06:44																										
541199017	10	18:10:51																							X	X		
541199018	10	18:12:37																							X	X		
CCV02	1	18:14:25																							X	X		
CCB02	1	18:16:12																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541199

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 11-MAY-21 **End Date:** 12-MAY-21 **Data File:** 210511-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	20:08:46	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	20:12:22	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	20:15:59	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	20:19:35	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	20:23:12	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	20:26:48	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	20:30:25	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	20:34:01	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	20:37:38	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	20:41:15	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	20:44:52	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	20:48:29	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	20:52:06	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	2	20:55:43																										
ZZZZZZ	2	20:59:19																										
CCV	1	21:02:57	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	21:06:34	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	2	21:10:12																										
ZZZZZZ	2	21:13:48																										
ZZZZZZ	2	21:17:24																										
ZZZZZZ	2	21:21:00																										
ZZZZZZ	10	21:24:36																										
ZZZZZZ	20	21:28:12																										
ZZZZZZ	20	21:31:48																										
ZZZZZZ	20	21:35:24																										
ZZZZZZ	100	21:38:59																										
CCV	1	21:42:37	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	21:46:14	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	21:49:52																										
ZZZZZZ	1	21:53:28																										
ZZZZZZ	1	21:57:05																										
ZZZZZZ	1	22:00:42																										
ZZZZZZ	1	22:04:19																										
ZZZZZZ	1	22:07:54																										
ZZZZZZ	1	22:11:30																										
ZZZZZZ	1	22:15:06																										
ZZZZZZ	1	22:18:43																										
ZZZZZZ	1	22:22:19																										
CCV	1	22:25:56	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	22:29:33	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	22:33:10																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541199

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 11-MAY-21 **End Date:** 12-MAY-21 **Data File:** 210511-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	22:36:46																										
ZZZZZZ	1	22:40:22																										
ZZZZZZ	1	22:43:57																										
ZZZZZZ	1	22:47:33																										
ZZZZZZ	5	22:51:09																										
ZZZZZZ	10	22:54:45																										
ZZZZZZ	10	22:58:22																										
ZZZZZZ	10	23:01:58																										
ZZZZZZ	50	23:05:34																										
CCV03	1	23:09:11	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	23:12:48	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799694	1	23:16:25	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799695	1	23:20:01	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199001	1	23:23:37	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799696	1	23:27:13	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799697	1	23:30:49	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	23:34:24																										
1204799698	5	23:38:00	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199002	1	23:41:36	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199003	1	23:45:11	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	23:48:49	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	23:52:26	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199004	1	23:56:02	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199005	1	23:59:38	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199006	1	00:03:14	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199007	1	00:06:50	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199008	1	00:10:25	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199009	1	00:14:01	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199010	1	00:17:37	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199011	1	00:21:13	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV05	1	00:24:50	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	00:28:27	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199012	1	00:32:03	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199013	1	00:35:39	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199014	1	00:39:15	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199015	1	00:42:51	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199016	1	00:46:26	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199017	1	00:50:02	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199018	1	00:53:38	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199019	1	00:57:14	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541199020	1	01:00:49	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541199

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 11-MAY-21

End Date: 12-MAY-21

Data File: 210511-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCV06	1	01:04:27	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB06	1	01:08:03	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3   Uranium-234 abbreviated U4   Uranium-235 abbreviated U5
Uranium-236 abbreviated U6   Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541199

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 12-MAY-21

End Date: 12-MAY-21

Data File: 210512-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	15:26:50					X																					
S10	1	15:28:38					X																					
S100	1	15:30:27					X																					
ICV01	1	15:32:15					X																					
ICB01	1	15:34:03					X																					
CRDL01	1	15:35:51					X																					
ICSA01	1	15:37:39					X																					
ICSAB01	1	15:39:27					X																					
CCV01	1	15:41:16					X																					
CCB01	1	15:43:05					X																					
ZZZZZZ	1	15:44:53																										
ZZZZZZ	1	15:46:41																										
ZZZZZZ	1	15:48:29																										
ZZZZZZ	1	15:50:18																										
ZZZZZZ	1	15:52:06																										
ZZZZZZ	1	15:53:54																										
ZZZZZZ	1	15:57:17																										
ZZZZZZ	1	15:59:04																										
ZZZZZZ	5	16:00:52																										
CCV	1	16:02:41					X																					
CCB	1	16:04:30					X																					
ZZZZZZ	1	16:06:19																										
ZZZZZZ	1	16:08:07																										
ZZZZZZ	1	16:09:55																										
ZZZZZZ	1	16:11:43																										
ZZZZZZ	5	16:13:31																										
ZZZZZZ	1	16:15:19																										
ZZZZZZ	1	16:17:07																										
CCV	1	16:18:56					X																					
CCB	1	16:20:44					X																					
ZZZZZZ	1	16:22:33																										
ZZZZZZ	1	16:24:22																										
ZZZZZZ	1	16:26:10																										
ZZZZZZ	1	16:27:58																										
ZZZZZZ	1	16:29:46																										
ZZZZZZ	1	16:31:33																										
ZZZZZZ	1	16:33:21																										
ZZZZZZ	1	16:35:09																										
CCV	1	16:36:58					X																					
CCB	1	16:38:47					X																					
ZZZZZZ	1	16:40:36																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541199

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 12-MAY-21 **End Date:** 12-MAY-21 **Data File:** 210512-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	16:42:24																										
ZZZZZZ	1	16:44:12																										
ZZZZZZ	1	16:46:00																										
ZZZZZZ	1	16:47:48																										
ZZZZZZ	1	16:49:36																										
ZZZZZZ	1	16:51:24																										
ZZZZZZ	1	16:53:12																										
ZZZZZZ	1	16:58:41																										
CCV	1	17:00:31					X																					
CCB	1	17:02:20					X																					
ZZZZZZ	1	17:04:09																										
ZZZZZZ	1	17:05:57																										
ZZZZZZ	1	17:07:45																										
ZZZZZZ	1	17:09:33																										
ZZZZZZ	1	17:11:21																										
ZZZZZZ	1	17:13:09																										
ZZZZZZ	1	17:14:58																										
ZZZZZZ	5	17:16:46																										
CCV02	1	17:18:36					X																					
CCB02	1	17:20:24					X																					
1204799694	1	17:22:14					X																					
1204799695	1	17:24:02					X																					
541199001	1	17:25:50					X																					
1204799696	1	17:27:38					X																					
1204799697	1	17:29:26					X																					
ZZZZZZ	1	17:31:15																										
1204799698	5	17:33:03					X																					
541199002	1	17:34:51					X																					
541199003	1	17:36:39					X																					
CCV03	1	17:38:28					X																					
CCB03	1	17:40:16					X																					
541199004	1	17:42:04					X																					
541199005	1	17:43:52					X																					
541199006	1	17:45:40					X																					
541199007	1	17:47:28					X																					
541199008	1	17:49:16					X																					
541199009	1	17:51:04					X																					
541199010	1	17:52:52					X																					
541199011	1	17:54:40					X																					
541199012	1	17:56:28					X																					
CCV04	1	17:58:17					X																					

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541199

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 12-MAY-21 **End Date:** 12-MAY-21 **Data File:** 210512-6

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB04	1	18:00:06					X																					
541199013	1	18:01:55					X																					
541199014	1	18:03:42					X																					
541199015	1	18:05:30					X																					
541199016	1	18:07:19					X																					
541199017	1	18:09:07					X																					
541199018	1	18:10:55					X																					
541199019	1	18:12:43					X																					
541199020	1	18:14:31					X																					
CCV05	1	18:16:20					X																					
CCB05	1	18:18:09					X																					

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 541199

Contract: DMAX00801 **Lab Code:** **GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 541199

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117229**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799695	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799695	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799696	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799696	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799697	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799697	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204799694 MB	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
1204799695 LCS	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199001	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
1204799698 SDILT (541199001)	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
1204799696 MS (541199001)	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
1204799697 MSD (541199001)	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199002	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199003	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199004	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199005	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199006	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199007	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199008	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199009	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199010	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199011	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199012	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199013	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199014	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199015	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199016	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199017	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199018	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199019	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2
541199020	23-APR-2021 09:00:04	Ground Water	50	04/23/21 15:00	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3279375	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 91 C
Temperature within limits (Y/N)?: y
Thermometer ID: 1120212072
Hot Block ID: 11
Digestion tube lot #: 2008043

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 12, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541200

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 17, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04142021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541200

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541200

May 12, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 17, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541200001	HA20-CMT-6D1-04142021
541200002	HA20-CMT-6D1-04142021
541200003	SW-2A-04142021
541200004	SW-2A-04142021
541200005	OW-3-04142021
541200006	OW-3-04142021
541200007	GZW-6-1-04142021
541200008	GZW-6-1-04142021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page: 3 of 3
Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]: 04142021
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541200

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Radioactive (If yes, please supply isotopic info.) (sample be considered:)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) NI	Dissolved Metals (6020A ICP-MS) NI	U-235/U-238 plus Total U Calc. NI								<-- Preservative Type (6) Comments Note: extra sample is required for sample specific QC
EB20-CMT-6D1-04142021	4/14/2021	16:15	N	Y	GW	U238		2	X	X	X								Total and Diss. ICP-MS List:
SW-2A-04142021	4/14/2021	16:15	N	Y	GW	U238		2	X	X	X								
OW-3-04142021	4/14/2021	16:50	N	Y	GW	U238		2	X	X	X								Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
GZW-6-1-04142021	4/14/2021	17:55	N	Y	GW	U238		2	X	X	X								
																			U-235/U-238 plus Total U Calc. for Total and Dissolved

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/16/2021	0800	1	[signature]	4/16/21	0800
2	[signature]	4/16/21	1530	2	[signature]	41721	920
3				3			

TAT Requested: Normal: X Rush: _____ Specify: ________

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** _____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* **- 3**, *6010B/7470A* **- 1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive materials detected via stat [illegible]

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541200
Received By: Stacy Boone	Date Received: April 17, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 6884 6500 3°c 7734 6884 6451 4°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:_______
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?			✓	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) SEE ATTACHED
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7734 6884 6716 3°c 7734 6884 5948 2°c

7734 6884 6201 3°c 7734 6884 6407 4°c

PM (or PMA) review: Initials MB Date 4/19/21 Page 1 of 2

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC SAMPLE RECEIPT & REVIEW CONTINUATION FORM

Client: DMAX Received By: SB Date Received: 4/17/21 SDG/AR/COC/Work Order: 541200

ID:	COC TIME:	SAMPLE TIME:
HB-10-04142021	14:30	16:05
HBPZ-2R-04142021	14:05	14:30
HA20-CMT-61-04142021	14:00	14:05
~~GW~~		
GZW-11-2-04152021	13:05	16:05

PM (or PMA) review: Initials MB Date 4/19/21 Page 2 of 2

Work Order Containers

Sample ID: **541200001**
Client Sample ID: **HA20−CMT−6D1−04142021**
Description: **Ground Water**

Label: 541200001.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:27:42	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:39:35	Hannah Hatherly	Transfered custody to batch 2117221
19−APR−21 19:39:35	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117221 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541200001.01.01	**Type: New Undefined**	
10−MAY−21 19:00:54	Paul Boyd	Transfered custody to batch 2117222
10−MAY−21 19:00:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541200002**
Client Sample ID: **HA20−CMT−6D1−04142021**
Description: **Dissolved Ground Water**

Label: 541200002.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:27:42	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:39:35	Hannah Hatherly	Transfered custody to batch 2117221
19−APR−21 19:39:35	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117221 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541200002.01.01	**Type: New Undefined**	
10−MAY−21 19:00:54	Paul Boyd	Transfered custody to batch 2117222
10−MAY−21 19:00:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541200003**
Client Sample ID: **SW−2A−04142021**
Description: **Ground Water**

Label: 541200003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:27:42	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:39:35	Hannah Hatherly	Transfered custody to batch 2117221
19−APR−21 19:39:35	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117221 to

Work Order Containers

Sample ID: **541200003**
Client Sample ID: **SW−2A−04142021**
Description: **Ground Water**

Label: 541200003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541200003.01.01 **Type: New Undefined**

10−MAY−21 19:00:54	Paul Boyd	Transfered custody to batch 2117222
10−MAY−21 19:00:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541200004**
Client Sample ID: **SW−2A−04142021**
Description: **Dissolved Ground Water**

Label: 541200004.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:27:42	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:39:35	Hannah Hatherly	Transfered custody to batch 2117221
19−APR−21 19:39:35	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117221 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541200004.01.01 **Type: New Undefined**

10−MAY−21 19:00:54	Paul Boyd	Transfered custody to batch 2117222
10−MAY−21 19:00:54	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541200005**
Client Sample ID: **OW−3−04142021**
Description: **Ground Water**

Label: 541200005.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:27:42	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:39:35	Hannah Hatherly	Transfered custody to batch 2117221
19−APR−21 19:39:35	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117221 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Return Shelf Chemistry Samples

Work Order Containers

Sample ID: 541200005
Client Sample ID: OW−3−04142021
Description: Ground Water

Label: 541200005.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541200005.01.01	Type: New Undefined	
10−MAY−21 19:00:55	Paul Boyd	Transfered custody to batch 2117222
10−MAY−21 19:00:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 541200006
Client Sample ID: OW−3−04142021
Description: Dissolved Ground Water

Label: 541200006.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:27:42	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:39:35	Hannah Hatherly	Transfered custody to batch 2117221
19−APR−21 19:39:35	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117221 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541200006.01.01	Type: New Undefined	
10−MAY−21 19:00:55	Paul Boyd	Transfered custody to batch 2117222
10−MAY−21 19:00:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: 541200007
Client Sample ID: GZW−6−1−04142021
Description: Ground Water

Label: 541200007.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:27:42	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:39:35	Hannah Hatherly	Transfered custody to batch 2117221
19−APR−21 19:39:35	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117221 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541200007.01.01	Type: New Undefined	
10−MAY−21 19:00:55	Paul Boyd	Transfered custody to batch 2117222
10−MAY−21 19:00:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541200008**
Client Sample ID: **GZW−6−1−04142021**
Description: **Dissolved Ground Water**

Label: 541200008.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:27:42	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
19−APR−21 19:39:35	Hannah Hatherly	Transfered custody to batch 2117221
19−APR−21 19:39:35	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
19−APR−21 22:40:33	Hannah Hatherly	Changed batch_id from 2117221 to
19−APR−21 22:40:33	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
20−APR−21 08:02:37	Michael Kinslow	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 541200008.01.01 **Type: New Undefined**

10−MAY−21 19:00:55	Paul Boyd	Transfered custody to batch 2117222
10−MAY−21 19:00:55	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 12 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541200

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batch:</u> 2117222

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2126999

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batch:</u> 2117221

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541200001	HA20-CMT-6D1-04142021
541200002	HA20-CMT-6D1-04142021
541200003	SW-2A-04142021
541200004	SW-2A-04142021
541200005	OW-3-04142021
541200006	OW-3-04142021
541200007	GZW-6-1-04142021
541200008	GZW-6-1-04142021
1204799670	Method Blank (MB)**ICP-MS**
1204799671	Laboratory Control Sample (LCS)
1204799674	541039003(MW-SD45-04122021L) Serial Dilution (SD)
1204799677	541039004(MW-SD45-04122021L) Serial Dilution (SD)
1204799672	541039003(MW-SD45-04122021S) Matrix Spike (MS)
1204799675	541039004(MW-SD45-04122021S) Matrix Spike (MS)
1204799673	541039003(MW-SD45-04122021SD) Matrix Spike Duplicate (MSD)
1204799676	541039004(MW-SD45-04122021SD) Matrix Spike Duplicate (MSD)
1204817666	541039003(MW-SD45-04122021PS) Post Spike (PS)
1204817667	541039004(MW-SD45-04122021PS) Post Spike (PS)

Samples 541200001, 002, 003, 004, 005, 006, 007 and 008 in this SDG were analyzed for metals on an "as received" basis.

<u>Data Summary:</u>

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

<u>Calibration Information</u>

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

<u>Quality Control (QC) Information</u>

Matrix Spike (MS/MSD) Recovery Statement
The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analytes. The post spike recoveries were within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recoveries may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204799672 (MW-SD45-04122021MS)	Beryllium	130* (75%-125%)
1204799673 (MW-SD45-04122021MSD)	Beryllium	126* (75%-125%)
1204799675 (MW-SD45-04122021MS)	Beryllium	126* (75%-125%)
1204799676 (MW-SD45-04122021MSD)	Beryllium	126* (75%-125%)

<u>Technical Information</u>

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541200005 (OW-3-04142021) and 541200006 (OW-3-04142021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541200	
	005	**006**
Sodium	10X	10X

<u>Certification Statement</u>

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541200 GEL Work Order: 541200

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
** Indicates analyte is a surrogate compound.
J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Jamie Johnson**

Date: 14 MAY 2021 **Title: Group Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541200 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541200001 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: HA20-CMT-6D1-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	41.9	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:02	210510-2	2117222
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7440-38-2	Arsenic	5.05	ug/L		2.00	5.00	5.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7440-39-3	Barium	16.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:22	210512-4	2117222
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7440-70-2	Calcium	49800	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:02	210510-2	2117222
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:02	210510-2	2117222
7440-48-4	Cobalt	0.506	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:02	210510-2	2117222
7440-50-8	Copper	0.379	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:02	210510-2	2117222
7439-89-6	Iron	101	ug/L		33.0	100	100	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7439-95-4	Magnesium	8990	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:02	210510-2	2117222
7439-96-5	Manganese	929	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7439-98-7	Molybdenum	50.4	ug/L		0.200	1.00	1.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7440-09-7	Potassium	8770	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:02	210510-2	2117222
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7440-23-5	Sodium	15700	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:02	210510-2	2117222
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 15:56	210511-3	2117222
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 14:43	210513-5	2117222
7440-61-1	Total Uranium	12.4	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0859	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:07	210510-1	2117222
7440-61-1	Uranium-238	12.3	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:07	210510-1	2117222
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:02	210510-2	2117222
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 15:56	210511-3	2117222

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117222	2117221	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541200 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541200002 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: HA20-CMT-6D1-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:06	210510-2	2117222
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7440-38-2	Arsenic	5.07	ug/L		2.00	5.00	5.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7440-39-3	Barium	16.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:24	210512-4	2117222
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7440-70-2	Calcium	49400	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:06	210510-2	2117222
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:06	210510-2	2117222
7440-48-4	Cobalt	0.493	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:06	210510-2	2117222
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:06	210510-2	2117222
7439-89-6	Iron	69.0	ug/L	J	33.0	100	100	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7439-95-4	Magnesium	9040	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:06	210510-2	2117222
7439-96-5	Manganese	893	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7439-98-7	Molybdenum	51.0	ug/L		0.200	1.00	1.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7440-09-7	Potassium	8770	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:06	210510-2	2117222
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7440-23-5	Sodium	15800	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:06	210510-2	2117222
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:00	210511-3	2117222
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 14:45	210513-5	2117222
7440-61-1	Total Uranium	12.4	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0867	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:09	210510-1	2117222
7440-61-1	Uranium-238	12.4	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:09	210510-1	2117222
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:06	210510-2	2117222
7440-66-6	Zinc	3.82	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 16:00	210511-3	2117222

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117222	2117221	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541200 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541200003 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: SW−2A−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:10	210510−2	2117222
7440−36−0	Antimony	2.63	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7440−38−2	Arsenic	69.1	ug/L		2.00	5.00	5.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7440−39−3	Barium	2.81	ug/L	J	0.670	4.00	4.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:26	210512−4	2117222
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7440−70−2	Calcium	19800	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:10	210510−2	2117222
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:10	210510−2	2117222
7440−48−4	Cobalt	0.448	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:10	210510−2	2117222
7440−50−8	Copper	0.383	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:10	210510−2	2117222
7439−89−6	Iron	337	ug/L		33.0	100	100	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7439−95−4	Magnesium	6310	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:10	210510−2	2117222
7439−96−5	Manganese	161	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7439−98−7	Molybdenum	10.9	ug/L		0.200	1.00	1.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7440−02−0	Nickel	1.73	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7440−09−7	Potassium	2060	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:10	210510−2	2117222
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7440−23−5	Sodium	13700	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:10	210510−2	2117222
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:09	210511−3	2117222
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 14:47	210513−5	2117222
7440−61−1	Total Uranium	2.12	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0142	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:11	210510−1	2117222
7440−61−1	Uranium−238	2.10	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:11	210510−1	2117222
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:10	210510−2	2117222
7440−66−6	Zinc	8.89	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 16:09	210511−3	2117222

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117222	2117221	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541200 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541200004 **BASIS:** Filtered **DATE COLLECTED** 14-APR-21

CLIENT ID: SW-2A-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:13	210510-2	2117222
7440-36-0	Antimony	2.56	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7440-38-2	Arsenic	69.0	ug/L		2.00	5.00	5.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7440-39-3	Barium	2.78	ug/L	J	0.670	4.00	4.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:27	210512-4	2117222
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7440-70-2	Calcium	20200	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:13	210510-2	2117222
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:13	210510-2	2117222
7440-48-4	Cobalt	0.324	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:13	210510-2	2117222
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:13	210510-2	2117222
7439-89-6	Iron	116	ug/L		33.0	100	100	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7439-95-4	Magnesium	6290	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:13	210510-2	2117222
7439-96-5	Manganese	161	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7439-98-7	Molybdenum	11.4	ug/L		0.200	1.00	1.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7440-02-0	Nickel	0.922	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7440-09-7	Potassium	2080	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:13	210510-2	2117222
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7440-23-5	Sodium	13700	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:13	210510-2	2117222
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:13	210511-3	2117222
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 14:49	210513-5	2117222
7440-61-1	Total Uranium	2.11	ug/L		0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0140	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:13	210510-1	2117222
7440-61-1	Uranium-238	2.09	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:13	210510-1	2117222
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:13	210510-2	2117222
7440-66-6	Zinc	4.16	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 16:13	210511-3	2117222

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117222	2117221	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541200 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541200005 **BASIS:** As Received **DATE COLLECTED** 14-APR-21

CLIENT ID: OW-3-04142021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:17	210510-2	2117222
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7440-39-3	Barium	26.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:29	210512-4	2117222
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7440-70-2	Calcium	5610	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:17	210510-2	2117222
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:17	210510-2	2117222
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:17	210510-2	2117222
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:17	210510-2	2117222
7439-89-6	Iron	173	ug/L		33.0	100	100	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7439-95-4	Magnesium	1200	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:17	210510-2	2117222
7439-96-5	Manganese	1.97	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7440-09-7	Potassium	2180	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:17	210510-2	2117222
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7440-23-5	Sodium	91900	ug/L		800	2500	2500	10	MS	PRB	05/11/21 17:24	210511-3	2117222
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:16	210511-3	2117222
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 14:51	210513-5	2117222
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:15	210510-1	2117222
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:15	210510-1	2117222
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:17	210510-2	2117222
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 16:16	210511-3	2117222

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117222	2117221	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541200 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541200006 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: OW−3−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:20	210510−2	2117222
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7440−39−3	Barium	27.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:31	210512−4	2117222
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7440−70−2	Calcium	5770	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:20	210510−2	2117222
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:20	210510−2	2117222
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 00:20	210510−2	2117222
7440−50−8	Copper	0.324	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:20	210510−2	2117222
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7439−95−4	Magnesium	1230	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:20	210510−2	2117222
7439−96−5	Manganese	1.90	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7440−09−7	Potassium	2250	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:20	210510−2	2117222
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7440−23−5	Sodium	91100	ug/L		800	2500	2500	10	MS	PRB	05/11/21 17:28	210511−3	2117222
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:20	210511−3	2117222
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 14:53	210513−5	2117222
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:16	210510−1	2117222
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:16	210510−1	2117222
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:20	210510−2	2117222
7440−66−6	Zinc	3.65	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 16:20	210511−3	2117222

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117222	2117221	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541200 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541200007 **BASIS:** As Received **DATE COLLECTED** 14−APR−21

CLIENT ID: GZW−6−1−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:24	210510−2	2117222
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7440−39−3	Barium	20.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:33	210512−4	2117222
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7440−70−2	Calcium	8860	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:24	210510−2	2117222
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:24	210510−2	2117222
7440−48−4	Cobalt	6.58	ug/L		0.300	1.00	1.00	1	MS	PRB	05/11/21 00:24	210510−2	2117222
7440−50−8	Copper	0.426	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:24	210510−2	2117222
7439−89−6	Iron	862	ug/L		33.0	100	100	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7439−95−4	Magnesium	1320	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:24	210510−2	2117222
7439−96−5	Manganese	153	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7440−02−0	Nickel	3.19	ug/L		0.600	2.00	2.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7440−09−7	Potassium	7940	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:24	210510−2	2117222
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7440−23−5	Sodium	23700	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:24	210510−2	2117222
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:23	210511−3	2117222
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 14:54	210513−5	2117222
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:18	210510−1	2117222
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:18	210510−1	2117222
7440−62−2	Vanadium	3.58	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:24	210510−2	2117222
7440−66−6	Zinc	150	ug/L		3.30	20.0	20.0	1	MS	PRB	05/11/21 16:23	210511−3	2117222

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117222	2117221	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541200 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541200008 **BASIS:** Filtered **DATE COLLECTED** 14−APR−21

CLIENT ID: GZW−6−1−04142021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/11/21 00:28	210510−2	2117222
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7440−39−3	Barium	20.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 16:35	210512−4	2117222
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7440−70−2	Calcium	8970	ug/L		80.0	200	200	1	MS	PRB	05/11/21 00:28	210510−2	2117222
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/11/21 00:28	210510−2	2117222
7440−48−4	Cobalt	6.34	ug/L		0.300	1.00	1.00	1	MS	PRB	05/11/21 00:28	210510−2	2117222
7440−50−8	Copper	0.611	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/11/21 00:28	210510−2	2117222
7439−89−6	Iron	57.6	ug/L	J	33.0	100	100	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7439−95−4	Magnesium	1330	ug/L		10.0	30.0	30.0	1	MS	PRB	05/11/21 00:28	210510−2	2117222
7439−96−5	Manganese	140	ug/L		1.00	5.00	5.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7440−02−0	Nickel	3.41	ug/L		0.600	2.00	2.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7440−09−7	Potassium	7870	ug/L		80.0	300	300	1	MS	PRB	05/11/21 00:28	210510−2	2117222
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7440−23−5	Sodium	23600	ug/L		80.0	250	250	1	MS	PRB	05/11/21 00:28	210510−2	2117222
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/11/21 16:27	210511−3	2117222
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 14:56	210513−5	2117222
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/12/21 16:18		2126999
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/10/21 20:20	210510−1	2117222
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/10/21 20:20	210510−1	2117222
7440−62−2	Vanadium	3.86	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/11/21 00:28	210510−2	2117222
7440−66−6	Zinc	154	ug/L		3.30	20.0	20.0	1	MS	PRB	05/11/21 16:27	210511−3	2117222

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117222	2117221	SW846 3005A	50	mL	50	mL	04/20/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.1	90.0 − 110.0	MS	10−MAY−21 19:19	210510−1
	Uranium−238	51.3	ug/L	49.64	ug/L	103.3	90.0 − 110.0	MS	10−MAY−21 19:19	210510−1
	Aluminum	5180	ug/L	5050	ug/L	102.5	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Calcium	4970	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Chromium	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Cobalt	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Copper	52.9	ug/L	50	ug/L	105.8	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Magnesium	5500	ug/L	5000	ug/L	110	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Sodium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Vanadium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	10−MAY−21 22:14	210510−2
	Antimony	53.4	ug/L	50	ug/L	106.8	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Arsenic	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Barium	52.6	ug/L	50	ug/L	105.1	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Cadmium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Iron	5110	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Lead	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Manganese	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Molybdenum	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Nickel	52.8	ug/L	50	ug/L	105.6	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Selenium	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Silver	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Sodium	5410	ug/L	5000	ug/L	108.2	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Thallium	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Zinc	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	11−MAY−21 14:08	210511−3
	Beryllium	53	ug/L	50	ug/L	105.9	90.0 − 110.0	MS	12−MAY−21 15:32	210512−4
	Thorium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	13−MAY−21 13:53	210513−5
CCV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.6	90.0 − 110.0	MS	10−MAY−21 19:28	210510−1
	Uranium−238	51.7	ug/L	49.64	ug/L	104.2	90.0 − 110.0	MS	10−MAY−21 19:28	210510−1
	Aluminum	5160	ug/L	5050	ug/L	102.1	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Chromium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Cobalt	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Copper	52.5	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Magnesium	5460	ug/L	5000	ug/L	109.3	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Potassium	5260	ug/L	5000	ug/L	105.1	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Sodium	5230	ug/L	5000	ug/L	104.6	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Vanadium	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	10−MAY−21 22:32	210510−2
	Antimony	53.4	ug/L	50	ug/L	106.9	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Arsenic	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Barium	52	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Cadmium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Iron	5100	ug/L	5000	ug/L	102	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Lead	47.7	ug/L	50	ug/L	95.4	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Manganese	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Molybdenum	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Nickel	52.9	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Selenium	52.5	ug/L	50	ug/L	105	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Silver	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Sodium	5190	ug/L	5000	ug/L	103.8	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Zinc	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	11−MAY−21 14:26	210511−3
	Beryllium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	12−MAY−21 15:41	210512−4
	Thorium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	13−MAY−21 14:02	210513−5
CCV02										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.8	90.0 − 110.0	MS	10−MAY−21 19:48	210510−1
	Uranium−238	51.6	ug/L	49.64	ug/L	104	90.0 − 110.0	MS	10−MAY−21 19:48	210510−1
	Aluminum	5080	ug/L	5050	ug/L	100.7	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Calcium	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Chromium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Cobalt	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Copper	52.9	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Magnesium	5390	ug/L	5000	ug/L	107.8	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Potassium	5250	ug/L	5000	ug/L	105	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Sodium	5190	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Vanadium	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	10−MAY−21 22:43	210510−2
	Antimony	55	ug/L	50	ug/L	110.1	90.0 − 110.0 *	MS	11−MAY−21 14:37	210511−3
	Arsenic	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Barium	53.2	ug/L	50	ug/L	106.4	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Cadmium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Iron	4980	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Lead	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Manganese	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Molybdenum	52.6	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Nickel	51.8	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Selenium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Silver	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Sodium	5290	ug/L	5000	ug/L	105.9	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Thallium	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Zinc	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	11−MAY−21 14:37	210511−3
	Beryllium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	12−MAY−21 16:02	210512−4
	Thorium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	13−MAY−21 14:23	210513−5
CCV03										
	Uranium−235	0.36	ug/L	0.36	ug/L	100.4	90.0 − 110.0	MS	10−MAY−21 20:04	210510−1
	Uranium−238	51.6	ug/L	49.64	ug/L	103.9	90.0 − 110.0	MS	10−MAY−21 20:04	210510−1
	Aluminum	5110	ug/L	5050	ug/L	101.2	90.0 − 110.0	MS	10−MAY−21 23:23	210510−2
	Calcium	4850	ug/L	5000	ug/L	97.1	90.0 − 110.0	MS	10−MAY−21 23:23	210510−2
	Chromium	49.5	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	10−MAY−21 23:23	210510−2
	Cobalt	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	10−MAY−21 23:23	210510−2
	Copper	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	10−MAY−21 23:23	210510−2
	Magnesium	5440	ug/L	5000	ug/L	108.8	90.0 − 110.0	MS	10−MAY−21 23:23	210510−2
	Potassium	5170	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	10−MAY−21 23:23	210510−2

METALS
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Initial and Continuing Calibration Verification

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Sodium	5230	ug/L	5000	ug/L	104.6	90.0 − 110.0	MS	10−MAY−21 23:23	210510−2
	Vanadium	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	10−MAY−21 23:23	210510−2
	Antimony	54.3	ug/L	50	ug/L	108.6	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Arsenic	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Barium	52.7	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Cadmium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Lead	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Manganese	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Molybdenum	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Nickel	51.8	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Selenium	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Silver	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Sodium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Thallium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Zinc	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	11−MAY−21 15:16	210511−3
	Beryllium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	12−MAY−21 16:18	210512−4
	Thorium	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	13−MAY−21 14:40	210513−5
CCV04										
	Uranium−235	0.35	ug/L	0.36	ug/L	98.6	90.0 − 110.0	MS	10−MAY−21 20:22	210510−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	10−MAY−21 20:22	210510−1
	Aluminum	4940	ug/L	5050	ug/L	97.9	90.0 − 110.0	MS	10−MAY−21 23:55	210510−2
	Calcium	4760	ug/L	5000	ug/L	95.2	90.0 − 110.0	MS	10−MAY−21 23:55	210510−2
	Chromium	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	10−MAY−21 23:55	210510−2
	Cobalt	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	10−MAY−21 23:55	210510−2
	Copper	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	10−MAY−21 23:55	210510−2
	Magnesium	5210	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	10−MAY−21 23:55	210510−2
	Potassium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	10−MAY−21 23:55	210510−2
	Sodium	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	MS	10−MAY−21 23:55	210510−2
	Vanadium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	10−MAY−21 23:55	210510−2
	Antimony	53.8	ug/L	50	ug/L	107.7	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Arsenic	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Barium	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Cadmium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Iron	4900	ug/L	5000	ug/L	98.1	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Lead	48.7	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Manganese	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Molybdenum	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Nickel	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Selenium	52.9	ug/L	50	ug/L	105.9	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Silver	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Sodium	5050	ug/L	5000	ug/L	101	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Thallium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Zinc	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	11−MAY−21 15:49	210511−3
	Beryllium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	12−MAY−21 16:36	210512−4
	Thorium	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	13−MAY−21 14:58	210513−5
CCV05										
	Aluminum	4880	ug/L	5050	ug/L	96.6	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Calcium	4730	ug/L	5000	ug/L	94.6	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Chromium	46.9	ug/L	50	ug/L	93.8	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Cobalt	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Copper	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Potassium	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Sodium	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Vanadium	47.3	ug/L	50	ug/L	94.5	90.0 − 110.0	MS	11−MAY−21 00:31	210510−2
	Antimony	54.2	ug/L	50	ug/L	108.4	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Arsenic	50.2	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Barium	54.8	ug/L	50	ug/L	109.5	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Cadmium	50.6	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Iron	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Lead	49.3	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Manganese	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Molybdenum	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Nickel	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Selenium	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Silver	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Sodium	5150	ug/L	5000	ug/L	102.9	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Thallium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Zinc	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	11−MAY−21 16:31	210511−3
	Beryllium	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	12−MAY−21 17:00	210512−4
CCV06										
	Antimony	54.1	ug/L	50	ug/L	108.2	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Arsenic	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Barium	54.3	ug/L	50	ug/L	108.6	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Cadmium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Iron	4840	ug/L	5000	ug/L	96.8	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Lead	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Manganese	48.6	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Molybdenum	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Nickel	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Selenium	52.4	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Silver	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Sodium	4930	ug/L	5000	ug/L	98.6	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Thallium	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
	Zinc	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	11−MAY−21 17:03	210511−3
CCV07										
	Antimony	54.3	ug/L	50	ug/L	108.5	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Arsenic	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Barium	54.9	ug/L	50	ug/L	109.8	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Cadmium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Iron	4830	ug/L	5000	ug/L	96.7	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Lead	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Manganese	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Molybdenum	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Nickel	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Selenium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Silver	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Sodium	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Thallium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3
	Zinc	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	11−MAY−21 17:32	210511−3

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0014	ug/L	.0014	ug/L	100	80.0 − 120.0	MS	10−MAY−21 19:23	210510−1
	Uranium−238	.21	ug/L	.2	ug/L	104.9	80.0 − 120.0	MS	10−MAY−21 19:23	210510−1
	Aluminum	49.5	ug/L	50	ug/L	99.1	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Calcium	216	ug/L	200	ug/L	108.1	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Chromium	9.88	ug/L	10	ug/L	98.8	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Cobalt	.985	ug/L	1	ug/L	98.5	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Copper	2.09	ug/L	2	ug/L	104.4	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Magnesium	31.5	ug/L	30	ug/L	105.1	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Potassium	320	ug/L	300	ug/L	106.5	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Sodium	261	ug/L	250	ug/L	104.5	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Vanadium	19.5	ug/L	20	ug/L	97.7	80.0 − 120.0	MS	10−MAY−21 22:21	210510−2
	Antimony	3.16	ug/L	3	ug/L	105.3	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Arsenic	4.95	ug/L	5	ug/L	98.9	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Barium	4.26	ug/L	4	ug/L	106.6	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Cadmium	1.06	ug/L	1	ug/L	105.6	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Iron	102	ug/L	100	ug/L	102	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Lead	2.15	ug/L	2	ug/L	107.7	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Manganese	5.1	ug/L	5	ug/L	102	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Molybdenum	1.02	ug/L	1	ug/L	102.2	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Nickel	2.12	ug/L	2	ug/L	106.1	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Selenium	5.34	ug/L	5	ug/L	106.9	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Silver	1.06	ug/L	1	ug/L	106.4	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Sodium	268	ug/L	250	ug/L	107.1	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Thallium	1.99	ug/L	2	ug/L	99.5	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Zinc	19	ug/L	20	ug/L	95	80.0 − 120.0	MS	11−MAY−21 14:15	210511−3
	Beryllium	.534	ug/L	.5	ug/L	106.8	80.0 − 120.0	MS	12−MAY−21 15:35	210512−4
	Thorium	2.16	ug/L	2	ug/L	108.2	80.0 − 120.0	MS	13−MAY−21 13:57	210513−5

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541200

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	10−MAY−21 19:21	210510−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	10−MAY−21 19:21	210510−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	10−MAY−21 22:18	210510−2
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	10−MAY−21 22:18	210510−2
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	10−MAY−21 22:18	210510−2
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	10−MAY−21 22:18	210510−2
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	11−MAY−21 14:11	210511−3
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	11−MAY−21 14:11	210511−3
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	11−MAY−21 14:11	210511−3
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	12−MAY−21 15:34	210512−4
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	13−MAY−21 13:55	210513−5
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 19:30	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 19:30	210510−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 22:36	210510−2

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541200

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 22:36	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 22:36	210510−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 22:36	210510−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 22:36	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 14:29	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Molybdenum	0.694	+/−1	J	0.2	1.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 14:29	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 14:29	210511−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 15:43	210512−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 14:04	210513−5
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 19:50	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 19:50	210510−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 22:47	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 22:47	210510−2

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541200

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Magnesium	18.1	+/−30	J	10.0	30.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 22:47	210510−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 22:47	210510−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 22:47	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 14:40	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Molybdenum	0.537	+/−1	J	0.2	1.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 14:40	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 14:40	210511−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 16:04	210512−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 14:25	210513−5
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 20:06	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 20:06	210510−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 23:26	210510−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 23:26	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 23:26	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 23:26	210510−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 23:26	210510−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	10−MAY−21 23:26	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 23:26	210510−2

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541200

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 23:26	210510−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 23:26	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 15:20	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 15:20	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 15:20	210511−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 16:20	210512−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 14:41	210513−5
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	10−MAY−21 20:23	210510−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	10−MAY−21 20:23	210510−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	10−MAY−21 23:59	210510−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	10−MAY−21 23:59	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	10−MAY−21 23:59	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	10−MAY−21 23:59	210510−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	10−MAY−21 23:59	210510−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	10−MAY−21 23:59	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	10−MAY−21 23:59	210510−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	10−MAY−21 23:59	210510−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	10−MAY−21 23:59	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 15:53	210511−3

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541200

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 15:53	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 15:53	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 15:53	210511−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 16:38	210512−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 15:00	210513−5
CCB05										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	11−MAY−21 00:35	210510−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	11−MAY−21 00:35	210510−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 00:35	210510−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 00:35	210510−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 16:34	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 16:34	210511−3

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541200

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 16:34	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 16:34	210511−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 17:02	210512−4
CCB06										
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 17:06	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 17:06	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 17:06	210511−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 17:06	210511−3
CCB07										
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	11−MAY−21 17:35	210511−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	11−MAY−21 17:35	210511−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541200

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	11−MAY−21 17:35	210511−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	11−MAY−21 17:35	210511−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	11−MAY−21 17:35	210511−3

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541200
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204799670								
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.339	ug/L	+/−0.5	BJ	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0001	ug/L					10−MAY−21 19:25	210510−1
	Uranium−238	0.035	ug/L					10−MAY−21 19:25	210510−1
ICSAB01									
	Uranium−235	0.14	ug/L	.145	ug/L	96.8	80.0 − 120.0	10−MAY−21 19:26	210510−1
	Uranium−238	19.9	ug/L	19.86	ug/L	100	80.0 − 120.0	10−MAY−21 19:26	210510−1

METALS
−4−
Interference Check Sample

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	91200	ug/L	100000	ug/L	91.2	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Calcium	93400	ug/L	100000	ug/L	93.4	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Chromium	0.801	ug/L					10−MAY−21 22:25	210510−2
	Cobalt	0.468	ug/L					10−MAY−21 22:25	210510−2
	Copper	0.235	ug/L					10−MAY−21 22:25	210510−2
	Magnesium	94900	ug/L	100000	ug/L	94.9	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Potassium	97800	ug/L	100000	ug/L	97.8	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Sodium	99000	ug/L	100000	ug/L	99	80.0 − 120.0	10−MAY−21 22:25	210510−2
	Vanadium	−0.392	ug/L					10−MAY−21 22:25	210510−2
ICSAB01									
	Aluminum	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Calcium	94000	ug/L	100000	ug/L	94	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Chromium	19.9	ug/L	20	ug/L	99.7	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Cobalt	19.4	ug/L	20.65	ug/L	93.8	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Copper	17.6	ug/L	20	ug/L	87.8	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Magnesium	96800	ug/L	100000	ug/L	96.8	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Potassium	99500	ug/L	100000	ug/L	99.5	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Sodium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	10−MAY−21 22:29	210510−2
	Vanadium	19.6	ug/L	20	ug/L	98.1	80.0 − 120.0	10−MAY−21 22:29	210510−2

METALS
−4−
Interference Check Sample

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.063	ug/L					11−MAY−21 14:19	210511−3
	Arsenic	0.155	ug/L					11−MAY−21 14:19	210511−3
	Barium	2.81	ug/L					11−MAY−21 14:19	210511−3
	Cadmium	0.823	ug/L					11−MAY−21 14:19	210511−3
	Iron	91600	ug/L	100000	ug/L	91.6	80.0 − 120.0	11−MAY−21 14:19	210511−3
	Lead	0.181	ug/L					11−MAY−21 14:19	210511−3
	Manganese	7.56	ug/L					11−MAY−21 14:19	210511−3
	Molybdenum	2170	ug/L	2000	ug/L	108	80.0 − 120.0	11−MAY−21 14:19	210511−3
	Nickel	0.269	ug/L					11−MAY−21 14:19	210511−3
	Selenium	0.517	ug/L					11−MAY−21 14:19	210511−3
	Silver	0.069	ug/L					11−MAY−21 14:19	210511−3
	Sodium	93600	ug/L	100000	ug/L	93.6	80.0 − 120.0	11−MAY−21 14:19	210511−3
	Thallium	0.015	ug/L					11−MAY−21 14:19	210511−3
	Zinc	−0.052	ug/L					11−MAY−21 14:19	210511−3
ICSAB01									
	Antimony	21.1	ug/L	20	ug/L	106	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Arsenic	21.8	ug/L	20	ug/L	109	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Barium	22.5	ug/L	22.35	ug/L	101	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Cadmium	19.9	ug/L	20.72	ug/L	95.9	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Iron	92400	ug/L	100000	ug/L	92.4	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Lead	18.4	ug/L	20	ug/L	91.8	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Manganese	26.9	ug/L	25.72	ug/L	104	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Molybdenum	2140	ug/L	2000	ug/L	107	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Nickel	18.2	ug/L	20	ug/L	91	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Selenium	21.8	ug/L	20	ug/L	109	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Silver	17.9	ug/L	20	ug/L	89.5	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Sodium	92400	ug/L	100000	ug/L	92.4	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Thallium	18.1	ug/L	20	ug/L	90.4	80.0 − 120.0	11−MAY−21 14:22	210511−3
	Zinc	18.2	ug/L	20	ug/L	90.9	80.0 − 120.0	11−MAY−21 14:22	210511−3

METALS
−4−
Interference Check Sample

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.015	ug/L					12−MAY−21 15:37	210512−4
ICSAB01									
	Beryllium	18.9	ug/L	20	ug/L	94.5	80.0 − 120.0	12−MAY−21 15:39	210512−4

METALS
−4−
Interference Check Sample

SDG No: 541200

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Thorium	2.12	ug/L					13−MAY−21 13:59	210513−5
ICSAB01									
	Thorium	21.5	ug/L	20	ug/L	107	80.0 − 120.0	13−MAY−21 14:00	210513−5

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METALS
−5a−

Matrix Spike Summary

SDG NO. 541200 **Client ID** MW−SD45−04122021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541039003 **Spike ID:** 1204799672

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Antimony	ug/L	75−125	57.2		1.00	U	50.0	114		MS
Arsenic	ug/L	75−125	52.4		2.00	U	50.0	104		MS
Barium	ug/L	75−125	78.2		23.4		50.0	110		MS
Beryllium	ug/L	75−125	64.9		0.200	U	50.0	130	N	MS
Cadmium	ug/L	75−125	54.3		0.300	U	50.0	108		MS
Calcium	ug/L		26800		25300		2000	76.1	N/A	MS
Chromium	ug/L	75−125	49.5		3.00	U	50.0	98.6		MS
Cobalt	ug/L	75−125	54.3		5.80		50.0	97		MS
Copper	ug/L	75−125	48.3		0.599	J	50.0	95.4		MS
Iron	ug/L	75−125	2050		33.0	U	2000	102		MS
Lead	ug/L	75−125	53.4		0.500	U	50.0	107		MS
Magnesium	ug/L	75−125	8990		6940		2000	102		MS
Manganese	ug/L		2310		2330		50.0	−40.8	N/A	MS
Molybdenum	ug/L	75−125	58.3		0.200	U	50.0	116		MS
Nickel	ug/L	75−125	58.0		7.79		50.0	100		MS
Potassium	ug/L	75−125	6340		4310		2000	102		MS
Selenium	ug/L	75−125	53.0		2.00	U	50.0	106		MS
Silver	ug/L	75−125	54.6		0.300	U	50.0	109		MS
Sodium	ug/L		27200		25200		2000	99.7	N/A	MS
Thallium	ug/L	75−125	52.4		0.600	U	50.0	105		MS
Thorium	ug/L	75−125	55.3		0.700	U	50.0	110		MS
Uranium−235	ug/L	75−125	0.365		0.0100	U	0.360	101		MS

SW846

METALS
−5a−

Matrix Spike Summary

SDG NO. 541200 **Client ID** MW−SD45−04122021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541039003 **Spike ID:** 1204799672

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−238	ug/L	75−125	52.2		0.132	J	49.6	105		MS
Aluminum	ug/L	75−125	2020		19.3	U	2000	101		MS
Vanadium	ug/L	75−125	51.3		3.30	U	50.0	98.8		MS
Zinc	ug/L	75−125	55.7		3.30	U	50.0	108		MS

***Analytical Methods:**
MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541200 **Client ID** MW−SD45−04122021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541039003 **Spike ID:** 1204799673

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Silver	ug/L	75−125	53.2		0.300	U	50.0	106		MS
Sodium	ug/L		26800		25200		2000	80.1	N/A	MS
Thallium	ug/L	75−125	51.1		0.600	U	50.0	102		MS
Thorium	ug/L	75−125	54.8		0.700	U	50.0	109		MS
Uranium−235	ug/L	75−125	0.362		0.0100	U	0.360	100		MS
Uranium−238	ug/L	75−125	51.8		0.132	J	49.6	104		MS
Vanadium	ug/L	75−125	51.3		3.30	U	50.0	98.6		MS
Zinc	ug/L	75−125	53.6		3.30	U	50.0	103		MS
Aluminum	ug/L	75−125	2000		19.3	U	2000	99.7		MS
Antimony	ug/L	75−125	56.8		1.00	U	50.0	114		MS
Arsenic	ug/L	75−125	51.9		2.00	U	50.0	103		MS
Barium	ug/L	75−125	76.8		23.4		50.0	107		MS
Beryllium	ug/L	75−125	63.1		0.200	U	50.0	126	N	MS
Cadmium	ug/L	75−125	53.2		0.300	U	50.0	106		MS
Calcium	ug/L		26500		25300		2000	61.5	N/A	MS
Chromium	ug/L	75−125	48.0		3.00	U	50.0	95.6		MS
Cobalt	ug/L	75−125	53.3		5.80		50.0	95		MS
Copper	ug/L	75−125	48.3		0.599	J	50.0	95.4		MS
Iron	ug/L	75−125	2070		33.0	U	2000	102		MS
Lead	ug/L	75−125	51.2		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	8840		6940		2000	94.8		MS
Manganese	ug/L		2280		2330		50.0	−106	N/A	MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541200 **Client ID:** MW−SD45−04122021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541039003 **Spike ID:** 1204799673

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Molybdenum	ug/L	75−125	56.4		0.200	U	50.0	113		MS
Nickel	ug/L	75−125	59.2		7.79		50.0	103		MS
Potassium	ug/L	75−125	6240		4310		2000	96.9		MS
Selenium	ug/L	75−125	52.1		2.00	U	50.0	104		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Summary

SDG NO. 541200 **Client ID** MW−SD45−04122021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541039004 **Spike ID:** 1204799675

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Sodium	ug/L		27200		25000		2000	109	N/A	MS
Thallium	ug/L	75−125	50.7		0.600	U	50.0	101		MS
Thorium	ug/L	75−125	54.4		0.700	U	50.0	108		MS
Uranium−235	ug/L	75−125	0.359		0.0100	U	0.360	99.7		MS
Uranium−238	ug/L	75−125	52.0		0.108	J	49.6	105		MS
Vanadium	ug/L	75−125	49.7		3.30	U	50.0	95.6		MS
Zinc	ug/L	75−125	52.7		5.02	J	50.0	95.3		MS
Aluminum	ug/L	75−125	1850		19.3	U	2000	92.3		MS
Antimony	ug/L	75−125	54.8		1.00	U	50.0	110		MS
Arsenic	ug/L	75−125	51.9		2.00	U	50.0	103		MS
Barium	ug/L	75−125	75.2		22.0		50.0	106		MS
Beryllium	ug/L	75−125	62.8		0.200	U	50.0	126	N	MS
Cadmium	ug/L	75−125	53.0		0.300	U	50.0	106		MS
Calcium	ug/L		27100		25100		2000	96.8	N/A	MS
Chromium	ug/L	75−125	47.0		3.00	U	50.0	93.7		MS
Cobalt	ug/L	75−125	55.2		5.60		50.0	99.1		MS
Copper	ug/L	75−125	50.2		0.530	J	50.0	99.3		MS
Iron	ug/L	75−125	2000		33.0	U	2000	99.2		MS
Lead	ug/L	75−125	52.2		0.500	U	50.0	104		MS
Magnesium	ug/L	75−125	8800		6910		2000	94.5		MS
Manganese	ug/L		2350		2240		50.0	226	N/A	MS
Molybdenum	ug/L	75−125	55.1		0.200	U	50.0	110		MS

METALS
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Matrix Spike Summary

SDG NO. 541200 **Client ID** MW−SD45−04122021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541039004 **Spike ID:** 1204799675

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Nickel	ug/L	75−125	57.1		7.71		50.0	98.8		MS
Potassium	ug/L	75−125	6300		4270		2000	102		MS
Selenium	ug/L	75−125	52.5		2.00	U	50.0	105		MS
Silver	ug/L	75−125	52.7		0.300	U	50.0	105		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541200 **Client ID** MW−SD45−04122021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541039004 **Spike ID:** 1204799676

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	1940		19.3	U	2000	96.9		MS
Antimony	ug/L	75−125	56.4		1.00	U	50.0	113		MS
Arsenic	ug/L	75−125	51.9		2.00	U	50.0	103		MS
Barium	ug/L	75−125	75.2		22.0		50.0	106		MS
Beryllium	ug/L	75−125	62.9		0.200	U	50.0	126	N	MS
Cadmium	ug/L	75−125	54.7		0.300	U	50.0	109		MS
Calcium	ug/L		26900		25100		2000	87.2	N/A	MS
Chromium	ug/L	75−125	47.6		3.00	U	50.0	95		MS
Cobalt	ug/L	75−125	54.5		5.60		50.0	97.7		MS
Copper	ug/L	75−125	48.5		0.530	J	50.0	95.9		MS
Iron	ug/L	75−125	2020		33.0	U	2000	100		MS
Lead	ug/L	75−125	53.0		0.500	U	50.0	106		MS
Magnesium	ug/L	75−125	8800		6910		2000	94.8		MS
Manganese	ug/L		2300		2240		50.0	128	N/A	MS
Molybdenum	ug/L	75−125	56.7		0.200	U	50.0	113		MS
Nickel	ug/L	75−125	57.4		7.71		50.0	99.3		MS
Potassium	ug/L	75−125	6340		4270		2000	104		MS
Selenium	ug/L	75−125	52.4		2.00	U	50.0	105		MS
Silver	ug/L	75−125	54.3		0.300	U	50.0	109		MS
Sodium	ug/L		26900		25000		2000	95.2	N/A	MS
Thallium	ug/L	75−125	51.0		0.600	U	50.0	102		MS
Thorium	ug/L	75−125	54.7		0.700	U	50.0	109		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541200 **Client ID:** MW−SD45−04122021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541039004 **Spike ID:** 1204799676

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.364		0.0100	U	0.360	101		MS
Uranium−238	ug/L	75−125	52.3		0.108	J	49.6	105		MS
Vanadium	ug/L	75−125	50.8		3.30	U	50.0	97.7		MS
Zinc	ug/L	75−125	52.6		5.02	J	50.0	95.1		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Spike Summary

SDG NO. 541200 **Client ID:** MW−SD45−04122021PS

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541039003 **Spike ID:** 1204817666

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Beryllium	ug/L	75−125	54.6		0.200	U	50.0	109		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Spike Summary

SDG NO.	541200	**Client ID**	MW−SD45−04122021PS
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	541039004	**Spike ID:**	1204817667

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Beryllium	ug/L	75−125	57.3		0.200	U	50.0	115		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 541200 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−SD45−04122021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799672 **Duplicate ID:** 1204799673 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2020		2000		1.14		MS
Antimony	ug/L	+/−20	57.2		56.8		.772		MS
Arsenic	ug/L	+/−20	52.4		51.9		1		MS
Barium	ug/L	+/−20	78.2		76.8		1.84		MS
Beryllium	ug/L	+/−20	64.9		63.1		2.78		MS
Cadmium	ug/L	+/−20	54.3		53.2		2.07		MS
Calcium	ug/L	+/−20	26800		26500		1.09		MS
Chromium	ug/L	+/−20	49.5		48.0		3.08		MS
Cobalt	ug/L	+/−20	54.3		53.3		1.8		MS
Copper	ug/L	+/−20	48.3		48.3		.00414		MS
Iron	ug/L	+/−20	2050		2070		.563		MS
Lead	ug/L	+/−20	53.4		51.2		4.26		MS
Magnesium	ug/L	+/−20	8990		8840		1.66		MS
Manganese	ug/L	+/−20	2310		2280		1.43		MS
Molybdenum	ug/L	+/−20	58.3		56.4		3.16		MS
Nickel	ug/L	+/−20	58.0		59.2		2.04		MS
Potassium	ug/L	+/−20	6340		6240		1.51		MS
Selenium	ug/L	+/−20	53.0		52.1		1.6		MS
Silver	ug/L	+/−20	54.6		53.2		2.67		MS
Sodium	ug/L	+/−20	27200		26800		1.45		MS
Thallium	ug/L	+/−20	52.4		51.1		2.56		MS
Thorium	ug/L	+/−20	55.3		54.8		.892		MS
Uranium−235	ug/L	+/−20	0.365		0.362		.771		MS
Uranium−238	ug/L	+/−20	52.2		51.8		.685		MS
Vanadium	ug/L	+/−20	51.3		51.3		.175		MS
Zinc	ug/L	+/−20	55.7		53.6		3.98		MS

Metals
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Duplicate Sample Summary

SDG No.: 541200 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−SD45−04122021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799672 **Duplicate ID:** 1204799673 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

Metals
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Duplicate Sample Summary

SDG No.: 541200 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−SD45−04122021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799675 **Duplicate ID:** 1204799676 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1850		1940		4.87		MS
Antimony	ug/L	+/−20	54.8		56.4		3		MS
Arsenic	ug/L	+/−20	51.9		51.9		.0424		MS
Barium	ug/L	+/−20	75.2		75.2		.00133		MS
Beryllium	ug/L	+/−20	62.8		62.9		.129		MS
Cadmium	ug/L	+/−20	53.0		54.7		3.12		MS
Calcium	ug/L	+/−20	27100		26900		.714		MS
Chromium	ug/L	+/−20	47.0		47.6		1.36		MS
Cobalt	ug/L	+/−20	55.2		54.5		1.3		MS
Copper	ug/L	+/−20	50.2		48.5		3.48		MS
Iron	ug/L	+/−20	2000		2020		1.1		MS
Lead	ug/L	+/−20	52.2		53.0		1.56		MS
Magnesium	ug/L	+/−20	8800		8800		.0691		MS
Manganese	ug/L	+/−20	2350		2300		2.12		MS
Molybdenum	ug/L	+/−20	55.1		56.7		2.95		MS
Nickel	ug/L	+/−20	57.1		57.4		.451		MS
Potassium	ug/L	+/−20	6300		6340		.707		MS
Selenium	ug/L	+/−20	52.5		52.4		.103		MS
Silver	ug/L	+/−20	52.7		54.3		3.07		MS
Sodium	ug/L	+/−20	27200		26900		1		MS
Thallium	ug/L	+/−20	50.7		51.0		.683		MS
Thorium	ug/L	+/−20	54.4		54.7		.59		MS
Uranium−235	ug/L	+/−20	0.359		0.364		1.35		MS
Uranium−238	ug/L	+/−20	52.0		52.3		.579		MS
Vanadium	ug/L	+/−20	49.7		50.8		2.11		MS
Zinc	ug/L	+/−20	52.7		52.6		.165		MS

Metals
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Duplicate Sample Summary

SDG No.: 541200 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−SD45−04122021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799675 **Duplicate ID:** 1204799676 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
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Laboratory Control Sample Summary

SDG NO. 541200

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799671								
	Vanadium	ug/L	50.0	49.7		99.5	80−120	MS
	Zinc	ug/L	50.0	49.6		99.2	80−120	MS
	Aluminum	ug/L	2000	1990		99.4	80−120	MS
	Antimony	ug/L	50.0	53.7		107	80−120	MS
	Arsenic	ug/L	50.0	49.6		99.2	80−120	MS
	Barium	ug/L	50.0	52.2		104	80−120	MS
	Beryllium	ug/L	50.0	54.3		109	80−120	MS
	Cadmium	ug/L	50.0	53.3		107	80−120	MS
	Calcium	ug/L	2000	1980		99	80−120	MS
	Chromium	ug/L	50.0	47.5		95	80−120	MS
	Cobalt	ug/L	50.0	47.8		95.7	80−120	MS
	Copper	ug/L	50.0	48.6		97.2	80−120	MS
	Iron	ug/L	2000	1990		99.5	80−120	MS
	Lead	ug/L	50.0	55.8		112	80−120	MS
	Magnesium	ug/L	2000	2160		108	80−120	MS
	Manganese	ug/L	50.0	49.4		98.8	80−120	MS
	Molybdenum	ug/L	50.0	53.8		108	80−120	MS
	Nickel	ug/L	50.0	51.3		103	80−120	MS
	Potassium	ug/L	2000	2170		108	80−120	MS
	Selenium	ug/L	50.0	49.6		99.2	80−120	MS
	Silver	ug/L	50.0	56.4		113	80−120	MS
	Sodium	ug/L	2000	2070		103	80−120	MS
	Thallium	ug/L	50.0	54.7		109	80−120	MS
	Thorium	ug/L	50.0	45.4		90.7	80−120	MS
	Uranium−235	ug/L	0.360	0.356		98.8	80−120	MS
	Uranium−238	ug/L	49.6	50.8		102	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 541200 **Client ID** MW−SD45−04122021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541039003 **Serial Dilution ID:** 1204799674

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	23.4		23.8		1.704			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	25300		25300		.217		20	MS
Chromium	3	U	15	U				MS
Cobalt	5.8		6.05		4.238			MS
Copper	.599	J	1.5	U	2.671			MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	6940		7260		4.613		20	MS
Manganese	233		228		2.235		20	MS
Molybdenum	.2	U	1	U				MS
Nickel	7.79		8.06	J	3.442			MS
Potassium	4310		4430		2.894			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	25200		25100		.252		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.132	J	.335	U	69.196			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	16.5	U				MS

METALS
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Serial Dilution Sample Summary

SDG NO. 541200 **Client ID:** MW-SD45-04122021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541039003 **Serial Dilution ID:** 1204799674

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 541200 **Client ID** MW−SD45−04122021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541039004 **Serial Dilution ID:** 1204799677

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	22		22.9		4.116			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	25100		24500		2.574		20	MS
Chromium	3	U	15	U				MS
Cobalt	5.6		5.72		2.108			MS
Copper	.53	J	1.5	U	9.434			MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	6910		7070		2.288		20	MS
Manganese	224		213		5.027		20	MS
Molybdenum	.2	U	1	U				MS
Nickel	7.71		8.06	J	4.485			MS
Potassium	4270		4370		2.341			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	25000		24700		1.367		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.108	J	.335	U	57.724			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	5.02	J	16.5	U	58.897			MS

METALS
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Serial Dilution Sample Summary

SDG NO. 541200 **Client ID:** MW-SD45-04122021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541039004 **Serial Dilution ID:** 1204799677

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 541200 **Method Type**: MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2117221							
1204799670	MB for batch 2117221	MB	G	20−APR−21	50mL	50mL	
1204799671	LCS for batch 2117221	LCS	G	20−APR−21	50mL	50mL	
1204799672	MW−SD45−04122021S	MS	G	20−APR−21	50mL	50mL	
1204799675	MW−SD45−04122021S	MS	G	20−APR−21	50mL	50mL	
1204799673	MW−SD45−04122021SD	MSD	G	20−APR−21	50mL	50mL	
1204799676	MW−SD45−04122021SD	MSD	G	20−APR−21	50mL	50mL	
541200001	HA20−CMT−6D1−04142021	SAMPLE	G	20−APR−21	50mL	50mL	
541200002	HA20−CMT−6D1−04142021	SAMPLE	G	20−APR−21	50mL	50mL	
541200003	SW−2A−04142021	SAMPLE	G	20−APR−21	50mL	50mL	
541200004	SW−2A−04142021	SAMPLE	G	20−APR−21	50mL	50mL	
541200005	OW−3−04142021	SAMPLE	G	20−APR−21	50mL	50mL	
541200006	OW−3−04142021	SAMPLE	G	20−APR−21	50mL	50mL	
541200007	GZW−6−1−04142021	SAMPLE	G	20−APR−21	50mL	50mL	
541200008	GZW−6−1−04142021	SAMPLE	G	20−APR−21	50mL	50mL	

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Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541200

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	19:14:19																								X	X		
S10	1	19:16:06																								X	X		
S100	1	19:17:52																								X	X		
ICV01	1	19:19:39																								X	X		
ICB01	1	19:21:26																								X	X		
CRDL01	1	19:23:14																								X	X		
ICSA01	1	19:25:01																								X	X		
ICSAB01	1	19:26:50																								X	X		
CCV01	1	19:28:37																								X	X		
CCB01	1	19:30:24																								X	X		
1204799670	1	19:32:12																								X	X		
1204799671	1	19:33:59																								X	X		
ZZZZZZ	1	19:35:45																											
ZZZZZZ	1	19:37:32																											
ZZZZZZ	1	19:39:19																											
1204799672	1	19:41:06																								X	X		
1204799673	1	19:42:52																								X	X		
ZZZZZZ	1	19:44:39																											
1204799674	5	19:46:26																								X	X		
CCV02	1	19:48:14																								X	X		
CCB02	1	19:50:02																								X	X		
ZZZZZZ	1	19:51:49																											
1204799675	1	19:53:36																								X	X		
1204799676	1	19:55:22																								X	X		
ZZZZZZ	1	19:57:09																											
1204799677	5	19:58:56																								X	X		
ZZZZZZ	1	20:00:43																											
ZZZZZZ	1	20:02:30																											
CCV03	1	20:04:17																								X	X		
CCB03	1	20:06:05																								X	X		
541200001	1	20:07:52																								X	X		
541200002	1	20:09:39																								X	X		
541200003	1	20:11:26																								X	X		
541200004	1	20:13:13																								X	X		
541200005	1	20:15:00																								X	X		
541200006	1	20:16:46																								X	X		
541200007	1	20:18:33																								X	X		
541200008	1	20:20:20																								X	X		
CCV04	1	20:22:07																								X	X		
CCB04	1	20:23:55																								X	X		

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541200

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541200

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	22:03:49	X						X	X	X	X			X				X			X					X	
S10	1	22:07:25	X						X	X	X	X			X				X			X					X	
S100	1	22:11:02	X						X	X	X	X			X				X			X					X	
ICV01	1	22:14:39	X						X	X	X	X			X				X			X					X	
ICB01	1	22:18:16	X						X	X	X	X			X				X			X					X	
CRDL01	1	22:21:52	X						X	X	X	X			X				X			X					X	
ICSA01	1	22:25:29	X						X	X	X	X			X				X			X					X	
ICSAB01	1	22:29:05	X						X	X	X	X			X				X			X					X	
CCV01	1	22:32:42	X						X	X	X	X			X				X			X					X	
CCB01	1	22:36:19	X						X	X	X	X			X				X			X					X	
LR01	1	22:39:56	X						X	X	X	X			X				X			X					X	
CCV02	1	22:43:33	X						X	X	X	X			X				X			X					X	
CCB02	1	22:47:10	X						X	X	X	X			X				X			X					X	
1204799670	1	22:50:47	X						X	X	X	X			X				X			X					X	
1204799671	1	22:54:23	X						X	X	X	X			X				X			X					X	
ZZZZZZ	1	22:58:00																										
ZZZZZZ	1	23:01:37																										
ZZZZZZ	1	23:05:13																										
1204799672	1	23:08:50	X						X	X	X	X			X				X			X					X	
1204799673	1	23:12:26	X						X	X	X	X			X				X			X					X	
ZZZZZZ	1	23:16:03																										
1204799674	5	23:19:39	X						X	X	X	X			X				X			X					X	
CCV03	1	23:23:15	X						X	X	X	X			X				X			X					X	
CCB03	1	23:26:52	X						X	X	X	X			X				X			X					X	
ZZZZZZ	1	23:30:29																										
1204799675	1	23:34:05	X						X	X	X	X			X				X			X					X	
1204799676	1	23:37:41	X						X	X	X	X			X				X			X					X	
ZZZZZZ	1	23:41:17																										
1204799677	5	23:44:53	X						X	X	X	X			X				X			X					X	
ZZZZZZ	1	23:48:28																										
ZZZZZZ	1	23:52:04																										
CCV04	1	23:55:41	X						X	X	X	X			X				X			X					X	
CCB04	1	23:59:17	X						X	X	X	X			X				X			X					X	
541200001	1	00:02:54	X						X	X	X	X			X				X			X					X	
541200002	1	00:06:30	X						X	X	X	X			X				X			X					X	
541200003	1	00:10:05	X						X	X	X	X			X				X			X					X	
541200004	1	00:13:41	X						X	X	X	X			X				X			X					X	
541200005	1	00:17:17	X						X	X	X	X			X				X								X	
541200006	1	00:20:53	X						X	X	X	X			X				X								X	
541200007	1	00:24:29	X						X	X	X	X			X				X			X					X	
541200008	1	00:28:06	X						X	X	X	X			X				X			X					X	

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541200

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 10-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210510-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCV05	1	00:31:44	X						X	X	X	X			X				X			X					X	
CCB05	1	00:35:21	X						X	X	X	X			X				X			X					X	

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541200

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 11-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210511-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	13:57:25		X	X	X		X					X	X		X	X	X		X	X	X	X					X
S10	1	14:01:01		X	X	X		X					X	X		X	X	X		X	X	X	X					X
S100	1	14:04:37		X	X	X		X					X	X		X	X	X		X	X	X	X					X
ICV01	1	14:08:14		X	X	X		X					X	X		X	X	X		X	X	X	X					X
ICB01	1	14:11:50		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CRDL01	1	14:15:27		X	X	X		X					X	X		X	X	X		X	X	X	X					X
ICSA01	1	14:19:04		X	X	X		X					X	X		X	X	X		X	X	X	X					X
ICSAB01	1	14:22:41		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CCV01	1	14:26:18		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CCB01	1	14:29:55		X	X	X		X					X	X		X	X	X		X	X	X	X					X
LR01	1	14:33:32		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CCV02	1	14:37:09		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CCB02	1	14:40:45		X	X	X		X					X	X		X	X	X		X	X	X	X					X
1204799670	1	14:44:22		X	X	X		X					X	X		X	X	X		X	X		X					X
1204799671	1	14:47:59		X	X	X		X					X	X		X	X	X		X	X		X					X
ZZZZZZ	1	14:51:36																										
ZZZZZZ	1	14:55:13																										
ZZZZZZ	1	14:58:49																										
ZZZZZZ	1	15:02:26																										
1204799673	1	15:06:02		X	X	X		X					X	X			X	X		X	X		X					X
ZZZZZZ	1	15:09:38																										
1204799674	5	15:13:14		X	X	X		X					X	X			X	X		X	X		X					X
CCV03	1	15:16:52		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CCB03	1	15:20:30		X	X	X		X					X	X		X	X	X		X	X	X	X					X
ZZZZZZ	1	15:24:07																										
1204799675	1	15:27:44		X	X	X		X					X	X			X	X		X	X		X					X
1204799676	1	15:31:21		X	X	X		X					X	X			X	X		X	X		X					X
ZZZZZZ	1	15:34:58																										
1204799677	5	15:38:33		X	X	X		X					X	X			X	X		X	X		X					X
ZZZZZZ	1	15:42:10																										
ZZZZZZ	1	15:45:47																										
CCV04	1	15:49:25		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CCB04	1	15:53:02		X	X	X		X					X	X		X	X	X		X	X	X	X					X
541200001	1	15:56:40		X	X	X		X					X	X		X	X	X		X	X		X					X
541200002	1	16:00:16		X	X	X		X					X	X		X	X	X		X	X		X					X
1204799672	1	16:05:49		X	X	X		X					X	X			X	X		X	X		X					X
541200003	1	16:09:26		X	X	X		X					X	X		X	X	X		X	X		X					X
541200004	1	16:13:03		X	X	X		X					X	X		X	X	X		X	X		X					X
541200005	1	16:16:39		X	X	X		X					X	X		X	X	X		X	X		X					X
541200006	1	16:20:16		X	X	X		X					X	X		X	X	X		X	X		X					X
541200007	1	16:23:53		X	X	X		X					X	X		X	X	X		X	X		X					X

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541200

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 11-MAY-21 **End Date:** 11-MAY-21 **Data File:** 210511-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541200008	1	16:27:30		X	X	X		X					X	X		X	X	X		X	X		X					X
CCV05	1	16:31:08		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CCB05	1	16:34:45		X	X	X		X					X	X		X	X	X		X	X	X	X					X
ZZZZZZ	10	16:41:24																										
ZZZZZZ	10	16:45:00																										
ZZZZZZ	10	16:48:37																										
1204799672	10	16:52:14														X												
1204799673	10	16:55:50														X												
1204799674	50	16:59:27														X												
CCV06	1	17:03:05		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CCB06	1	17:06:42		X	X	X		X					X	X		X	X	X		X	X	X	X					X
ZZZZZZ	10	17:10:20																										
1204799675	10	17:13:57														X												
1204799676	10	17:17:34														X												
1204799677	50	17:21:10														X												
541200005	10	17:24:47																				X						
541200006	10	17:28:24																				X						
CCV07	1	17:32:02		X	X	X		X					X	X		X	X	X		X	X	X	X					X
CCB07	1	17:35:39		X	X	X		X					X	X		X	X	X		X	X	X	X					X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541200

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 12-MAY-21 **End Date:** 12-MAY-21 **Data File:** 210512-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	15:26:50					X																					
S10	1	15:28:38					X																					
S100	1	15:30:27					X																					
ICV01	1	15:32:15					X																					
ICB01	1	15:34:03					X																					
CRDL01	1	15:35:51					X																					
ICSA01	1	15:37:39					X																					
ICSAB01	1	15:39:27					X																					
CCV01	1	15:41:16					X																					
CCB01	1	15:43:05					X																					
1204799670	1	15:44:53					X																					
1204799671	1	15:46:41					X																					
ZZZZZZ	1	15:48:29																										
ZZZZZZ	1	15:50:18																										
ZZZZZZ	1	15:52:06																										
1204799672	1	15:53:54					X																					
1204799673	1	15:57:17					X																					
1204817666	1	15:59:04					X																					
1204799674	5	16:00:52					X																					
CCV02	1	16:02:41					X																					
CCB02	1	16:04:30					X																					
ZZZZZZ	1	16:06:19																										
1204799675	1	16:08:07					X																					
1204799676	1	16:09:55					X																					
ZZZZZZ	1	16:11:43																										
1204799677	5	16:13:31					X																					
ZZZZZZ	1	16:15:19																										
ZZZZZZ	1	16:17:07																										
CCV03	1	16:18:56					X																					
CCB03	1	16:20:44					X																					
541200001	1	16:22:33					X																					
541200002	1	16:24:22					X																					
541200003	1	16:26:10					X																					
541200004	1	16:27:58					X																					
541200005	1	16:29:46					X																					
541200006	1	16:31:33					X																					
541200007	1	16:33:21					X																					
541200008	1	16:35:09					X																					
CCV04	1	16:36:58					X																					
CCB04	1	16:38:47					X																					
ZZZZZZ	1	16:40:36																										

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541200

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 12-MAY-21 **End Date:** 12-MAY-21 **Data File:** 210512-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	16:42:24																										
ZZZZZZ	1	16:44:12																										
ZZZZZZ	1	16:46:00																										
ZZZZZZ	1	16:47:48																										
ZZZZZZ	1	16:49:36																										
ZZZZZZ	1	16:51:24																										
ZZZZZZ	1	16:53:12																										
1204817667	1	16:58:41					X																					
CCV05	1	17:00:31					X																					
CCB05	1	17:02:20					X																					

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541200

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 13-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210513-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	13:48:00																						X				
S10	1	13:49:50																						X				
S100	1	13:51:42																						X				
ICV01	1	13:53:34																						X				
ICB01	1	13:55:25																						X				
CRDL01	1	13:57:16																						X				
ICSA01	1	13:59:07																						X				
ICSAB01	1	14:00:57																						X				
CCV01	1	14:02:49																						X				
CCB01	1	14:04:40																						X				
1204799670	1	14:06:32																						X				
1204799671	1	14:08:23																						X				
ZZZZZZ	1	14:10:15																										
ZZZZZZ	1	14:12:06																										
ZZZZZZ	1	14:13:58																										
1204799672	1	14:15:50																						X				
1204799673	1	14:17:41																						X				
ZZZZZZ	1	14:19:33																										
1204799674	5	14:21:25																						X				
CCV02	1	14:23:17																						X				
CCB02	1	14:25:09																						X				
ZZZZZZ	1	14:27:01																										
1204799675	1	14:28:52																						X				
1204799676	1	14:30:44																						X				
ZZZZZZ	1	14:32:35																										
1204799677	5	14:34:27																						X				
ZZZZZZ	1	14:36:18																										
ZZZZZZ	1	14:38:10																										
CCV03	1	14:40:02																						X				
CCB03	1	14:41:54																						X				
541200001	1	14:43:47																						X				
541200002	1	14:45:39																						X				
541200003	1	14:47:31																						X				
541200004	1	14:49:23																						X				
541200005	1	14:51:14																						X				
541200006	1	14:53:06																						X				
541200007	1	14:54:57																						X				
541200008	1	14:56:49																						X				
CCV04	1	14:58:42																						X				
CCB04	1	15:00:34																						X				

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541200

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 541200

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 541200

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117221**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799671	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799671	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799672	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799672	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799675	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799675	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799673	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799673	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799676	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799676	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204799670 MB	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799671 LCS	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541039001	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541039002	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541039003	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799674 SDILT (541039003)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799672 MS (541039003)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799673 MSD (541039003)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541039004	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799677 SDILT (541039004)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799675 MS (541039004)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
1204799676 MSD (541039004)	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541039005	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541039006	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541200001	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541200002	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541200003	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541200004	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541200005	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541200006	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541200007	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2
541200008	20-APR-2021 09:15:04	Ground Water	50	04/20/21 15:15	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3267483	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 91 C
Temperature within limits (Y/N)?: y
Thermometer ID: 12411
Hot Block ID: 14

Prep Logbook

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check

Reagent/Solvent Lot ID	Description	Amount

Comments:
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 13, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541201

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 17, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04132021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541201

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541201

May 13, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 17, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541201001	MW-SD26-04132021
541201002	MW-SD26-04132021
541201003	PT-09-04132021
541201004	PT-09-04132021
541201005	BEW-4-04132021
541201006	BEW-4-04132021
541201007	HA20-CMT-4D1-04132021
541201008	HA20-CMT-4D1-04132021
541201009	MW-BM03-04132021
541201010	MW-BM03-04132021
541201011	MW-BS10-04132021
541201012	MW-BS10-04132021
541201013	MW-T10-04132021
541201014	MW-T10-04132021
541201015	EQ Blank1-04132021
541201016	EQ Blank1-04132021
541201017	MW-BS13-04132021
541201018	MW-BS13-04132021
541201019	MW-S30-04132021
541201020	MW-S30-04132021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page 5 of 11 SDG: 541201

Page: 1 of 2
Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]: 04132021
PO Number:

GEL Laboratories LLC — gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541201

GEL Work Order Number: ***GEL Project Manager: Zach Worsham***

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS)	Dissolved Metals (6020A ICP-MS)	U-235/U-238 plus Total U Calc.	Comments: Note: extra sample is required for sample specific QC
<-- Preservative Type (6)									NI	NI	NI	
MW-SD26-04132021	4/13/2021	9:15	N	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
PI-09-04132021	4/13/2021	9:40	N	Y	GW	U238		2	X	X	X	
BEW-4-04132021	4/13/2021	9:45	N	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
HA20-CMT-4D1-04132021	4/13/2021	10:10	N	Y	GW	U238		2	X	X	X	
MW-BM03-04132021	4/13/2021	11:05	N	Y	GW	U238		2	X	X	X	
MW-BS10-04132021	4/13/2021	12:00	N	Y	GW	U238		2	X	X	X	
MW-T10-04132021	4/13/2021	9:10	N	Y	GW	U238		2	X	X	X	
EQ Blank1-04132021	4/13/2021	13:00	N	Y	GW	U238		2	X	X	X	U-235/U-238 plus Total U Calc. for Total and Dissolved
MW-BS13-04132021	4/13/2021	12:10	N	Y	GW	U238		2	X	X	X	
MW-S30-04132021	4/13/2021	12:55	N/MS/MSD	Y	GW	U238		2	X	X	X	

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/16/2021	0800	1	[signature]	4/16/21	0800
2	[signature]	4/16/21	1530	2	[signature]	41721	920
3				3			

TAT Requested: Normal: X Rush: ____ Specify: ________

Fax Results: [ ] Yes [X] No
Select Deliverable: [X] C of A [X] QC Summary [X] Level 5
Additional Remarks:
For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** _____°C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive material detected via NaI m[illegible]

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541201
Received By: Stacy Boone	Date Received: April 17, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 6884 6500 3°c 7734 6884 6451 4°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:________
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?			✓	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) SEE ATTACHED
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7734 6884 6716 3°c 7734 6884 5948 2°c

7734 6884 6201 3°c 7734 6884 6407 4°c

PM (or PMA) review: Initials MB Date 4/19/21 Page 1 of 2

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC SAMPLE RECEIPT & REVIEW CONTINUATION FORM

Client: DMAX Received By: SB Date Received: 4/17/21 SDG/AR/COC/Work Order: 541201

ID:	COC TIME:	SAMPLE TIME:
HB-10-04142021	14:30	16:05
HBPZ-2R-04142021	14:05	14:30
HA20-CMT-61-04142021	14:00	14:05
~~GW~~		
GZW-11-2-04152021	13:05	16:05

PM (or PMA) review: Initials MB Date 4/19/21 Page 2 of 2

Work Order Containers

Sample ID: **541201001**
Client Sample ID: **MW−SD26−04132021**
Description: **Ground Water**

Label: 541201001.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201002**
Client Sample ID: **MW−SD26−04132021**
Description: **Dissolved Ground Water**

Label: 541201002.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201003**
Client Sample ID: **PT−09−04132021**
Description: **Ground Water**

Label: 541201003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541201004**
Client Sample ID: **PT−09−04132021**
Description: **Dissolved Ground Water**

Label: 541201004.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:00	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201005**
Client Sample ID: **BEW−4−04132021**
Description: **Ground Water**

Label: 541201005.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201006**
Client Sample ID: **BEW−4−04132021**
Description: **Dissolved Ground Water**

Label: 541201006.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541201007**
Client Sample ID: **HA20−CMT−4D1−04132021**
Description: **Ground Water**

Label: 541201007.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201008**
Client Sample ID: **HA20−CMT−4D1−04132021**
Description: **Dissolved Ground Water**

Label: 541201008.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201009**
Client Sample ID: **MW−BM03−04132021**
Description: **Ground Water**

Label: 541201009.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541201010**
Client Sample ID: **MW−BM03−04132021**
Description: **Dissolved Ground Water**

Label: 541201010.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201011**
Client Sample ID: **MW−BS10−04132021**
Description: **Ground Water**

Label: 541201011.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201012**
Client Sample ID: **MW−BS10−04132021**
Description: **Dissolved Ground Water**

Label: 541201012.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541201013**
Client Sample ID: **MW−T10−04132021**
Description: **Ground Water**

Label: 541201013.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201014**
Client Sample ID: **MW−T10−04132021**
Description: **Dissolved Ground Water**

Label: 541201014.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201015**
Client Sample ID: **EQ Blank1−04132021**
Description: **Ground Water**

Label: 541201015.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541201016**
Client Sample ID: **EQ Blank1−04132021**
Description: **Dissolved Ground Water**

Label: 541201016.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201017**
Client Sample ID: **MW−BS13−04132021**
Description: **Ground Water**

Label: 541201017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201018**
Client Sample ID: **MW−BS13−04132021**
Description: **Dissolved Ground Water**

Label: 541201018.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541201019**
Client Sample ID: **MW−S30−04132021**
Description: **Ground Water**

Label: 541201019.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:52:36	Hannah Hatherly	Transfered custody to batch 2117232
22−APR−21 18:52:36	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 21:42:10	Hannah Hatherly	Changed batch_id from 2117232 to
22−APR−21 21:42:10	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:09:01	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541201020**
Client Sample ID: **MW−S30−04132021**
Description: **Dissolved Ground Water**

Label: 541201020.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:32:57	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 13 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Preliminary Report
for

DMAX008 de maximis, inc.

Client SDG: 541201 GEL Work Order: 541201

The Qualifiers in this report are defined as follows:

*   Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

**   Indicates analyte is a surrogate compound.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. Results provided in this preliminary report have not had a final administrative review. Data should not be used for regulatory compliance until a final report has been issued.

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541201

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batches:</u> 2117233 and 2117235

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2128155

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batches:</u> 2117232 and 2117234

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541201001	MW-SD26-04132021
541201002	MW-SD26-04132021
541201003	PT-09-04132021
541201004	PT-09-04132021
541201005	BEW-4-04132021
541201006	BEW-4-04132021
541201007	HA20-CMT-4D1-04132021
541201008	HA20-CMT-4D1-04132021
541201009	MW-BM03-04132021
541201010	MW-BM03-04132021
541201011	MW-BS10-04132021
541201012	MW-BS10-04132021
541201013	MW-T10-04132021
541201014	MW-T10-04132021
541201015	EQ Blank1-04132021
541201016	EQ Blank1-04132021
541201017	MW-BS13-04132021
541201018	MW-BS13-04132021
541201019	MW-S30-04132021
541201020	MW-S30-04132021
1204799699	Method Blank (MB)**ICP-MS**
1204799704	Method Blank (MB)**ICP-MS**
1204799700	Laboratory Control Sample (LCS)
1204799705	Laboratory Control Sample (LCS)
1204799703	541201019(MW-S30-04132021L) Serial Dilution (SD)
1204799708	541201020(MW-S30-04132021L) Serial Dilution (SD)
1204799701	541201019(MW-S30-04132021S) Matrix Spike (MS)
1204799706	541201020(MW-S30-04132021S) Matrix Spike (MS)

1204799702 541201019(MW-S30-04132021SD) Matrix Spike Duplicate (MSD)
1204799707 541201020(MW-S30-04132021SD) Matrix Spike Duplicate (MSD)

Samples 541201001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019 and 020 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements

The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. ICP-MS. The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. ICP-MS.

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541201017 (MW-BS13-04132021) and 541201018 (MW-BS13-04132021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541201	
	017	018
Calcium	10X	10X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541201 GEL Work Order: 541201

The Qualifiers in this report are defined as follows:

*   Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

**   Indicates analyte is a surrogate compound.

J   Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

U   Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Edmund Frampton **Name: Edmund Frampton**

Date: 14 MAY 2021 **Title: Team Leader**

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201001 **BASIS:** As Received **DATE COLLECTED** 13-APR-21

CLIENT ID: MW-SD26-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	40.4	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-39-3	Barium	20.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-70-2	Calcium	31000	ug/L		80.0	200	200	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-48-4	Cobalt	1.10	ug/L		0.300	1.00	1.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-50-8	Copper	0.322	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7439-89-6	Iron	62.7	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7439-95-4	Magnesium	5230	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7439-96-5	Manganese	1.97	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7439-98-7	Molybdenum	0.466	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-02-0	Nickel	1.50	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-09-7	Potassium	3500	ug/L		80.0	300	300	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-23-5	Sodium	24800	ug/L		80.0	250	250	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-61-1	Total Uranium	0.178	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:23	210513-1	2117233
7440-61-1	Uranium-238	0.178	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:23	210513-1	2117233
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 06:48	210513-3	2117233
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 06:48	210513-3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201002 **BASIS:** Filtered **DATE COLLECTED** 13-APR-21

CLIENT ID: MW-SD26-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-39-3	Barium	20.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-70-2	Calcium	31600	ug/L		80.0	200	200	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-48-4	Cobalt	0.971	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7439-95-4	Magnesium	5470	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7439-98-7	Molybdenum	0.373	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-02-0	Nickel	1.45	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-09-7	Potassium	3550	ug/L		80.0	300	300	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-23-5	Sodium	25700	ug/L		80.0	250	250	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-61-1	Total Uranium	0.0980	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:24	210513-1	2117233
7440-61-1	Uranium-238	0.0980	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:24	210513-1	2117233
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 06:51	210513-3	2117233
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 06:51	210513-3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201003 **BASIS:** As Received **DATE COLLECTED** 13-APR-21

CLIENT ID: PT-09-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-38-2	Arsenic	2.66	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-39-3	Barium	49.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-70-2	Calcium	24100	ug/L		80.0	200	200	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-48-4	Cobalt	2.67	ug/L		0.300	1.00	1.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-50-8	Copper	1.08	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7439-89-6	Iron	5560	ug/L		33.0	100	100	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7439-95-4	Magnesium	8210	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7439-96-5	Manganese	667	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7439-98-7	Molybdenum	0.287	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-02-0	Nickel	2.19	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-09-7	Potassium	5310	ug/L		80.0	300	300	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-23-5	Sodium	11800	ug/L		80.0	250	250	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-61-1	Total Uranium	0.334	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:26	210513-1	2117233
7440-61-1	Uranium-238	0.334	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:26	210513-1	2117233
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 06:55	210513-3	2117233
7440-66-6	Zinc	55.2	ug/L		3.30	20.0	20.0	1	MS	PRB	05/14/21 06:55	210513-3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201004 **BASIS:** Filtered **DATE COLLECTED** 13-APR-21

CLIENT ID: PT-09-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-39-3	Barium	46.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-70-2	Calcium	23600	ug/L		80.0	200	200	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-48-4	Cobalt	2.13	ug/L		0.300	1.00	1.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7439-89-6	Iron	4200	ug/L		33.0	100	100	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7439-95-4	Magnesium	8160	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7439-96-5	Manganese	310	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7439-98-7	Molybdenum	0.221	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-02-0	Nickel	1.93	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-09-7	Potassium	5310	ug/L		80.0	300	300	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-23-5	Sodium	11600	ug/L		80.0	250	250	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:28	210513-1	2117233
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:28	210513-1	2117233
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 06:59	210513-3	2117233
7440-66-6	Zinc	39.3	ug/L		3.30	20.0	20.0	1	MS	PRB	05/14/21 06:59	210513-3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201005 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: BEW−4−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−39−3	Barium	12.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−70−2	Calcium	31900	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−48−4	Cobalt	0.547	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7439−89−6	Iron	4860	ug/L		33.0	100	100	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7439−95−4	Magnesium	8730	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7439−96−5	Manganese	173	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7439−98−7	Molybdenum	5.77	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−02−0	Nickel	8.58	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−09−7	Potassium	5060	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−23−5	Sodium	19400	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−61−1	Total Uranium	0.882	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:30	210513−1	2117233
7440−61−1	Uranium−238	0.882	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:30	210513−1	2117233
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:02	210513−3	2117233
7440−66−6	Zinc	28.3	ug/L		3.30	20.0	20.0	1	MS	PRB	05/14/21 07:02	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201006 **BASIS:** Filtered **DATE COLLECTED** 13-APR-21

CLIENT ID: BEW-4-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-39-3	Barium	9.99	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-70-2	Calcium	31800	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-48-4	Cobalt	0.423	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7439-89-6	Iron	59.6	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7439-95-4	Magnesium	8610	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7439-96-5	Manganese	160	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7439-98-7	Molybdenum	6.77	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-02-0	Nickel	6.61	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-09-7	Potassium	5130	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-23-5	Sodium	19600	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-61-1	Total Uranium	0.812	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:32	210513-1	2117233
7440-61-1	Uranium-238	0.812	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:32	210513-1	2117233
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:06	210513-3	2117233
7440-66-6	Zinc	4.95	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:06	210513-3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201007 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: HA20−CMT−4D1−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	70.2	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−39−3	Barium	13.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−70−2	Calcium	42900	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−50−8	Copper	0.527	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7439−89−6	Iron	201	ug/L		33.0	100	100	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7439−95−4	Magnesium	10100	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7439−96−5	Manganese	227	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7439−98−7	Molybdenum	3.24	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−09−7	Potassium	4320	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−23−5	Sodium	16100	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−61−1	Total Uranium	11.0	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0740	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:37	210513−1	2117233
7440−61−1	Uranium−238	11.0	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:37	210513−1	2117233
7440−62−2	Vanadium	5.02	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:17	210513−3	2117233
7440−66−6	Zinc	5.44	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:17	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201008 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: HA20−CMT−4D1−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	26.1	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−38−2	Arsenic	2.01	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−39−3	Barium	12.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−70−2	Calcium	43400	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7439−95−4	Magnesium	10100	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7439−96−5	Manganese	222	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7439−98−7	Molybdenum	4.43	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−09−7	Potassium	4380	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−23−5	Sodium	16300	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−61−1	Total Uranium	11.0	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0793	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:39	210513−1	2117233
7440−61−1	Uranium−238	10.9	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:39	210513−1	2117233
7440−62−2	Vanadium	4.64	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:21	210513−3	2117233
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:21	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201009 **BASIS:** As Received **DATE COLLECTED** 13-APR-21

CLIENT ID: MW-BM03-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	107	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-36-0	Antimony	5.00	ug/L		1.00	3.00	3.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-38-2	Arsenic	285	ug/L		2.00	5.00	5.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-39-3	Barium	47.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-70-2	Calcium	39100	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-48-4	Cobalt	0.590	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-50-8	Copper	2.28	ug/L		0.300	2.00	2.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7439-89-6	Iron	526	ug/L		33.0	100	100	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7439-95-4	Magnesium	8770	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7439-96-5	Manganese	46.5	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7439-98-7	Molybdenum	8.29	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-02-0	Nickel	2.40	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-09-7	Potassium	4220	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-23-5	Sodium	20100	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-61-1	Total Uranium	56.6	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.401	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:40	210513-1	2117233
7440-61-1	Uranium-238	56.2	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:40	210513-1	2117233
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:24	210513-3	2117233
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:24	210513-3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201010 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−BM03−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	62.4	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−36−0	Antimony	4.94	ug/L		1.00	3.00	3.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−38−2	Arsenic	294	ug/L		2.00	5.00	5.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−39−3	Barium	47.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−70−2	Calcium	39800	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−48−4	Cobalt	0.489	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7439−89−6	Iron	78.9	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7439−95−4	Magnesium	9040	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7439−96−5	Manganese	40.4	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7439−98−7	Molybdenum	9.30	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−02−0	Nickel	2.72	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−09−7	Potassium	4480	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−23−5	Sodium	21100	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−61−1	Total Uranium	59.4	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.423	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:42	210513−1	2117233
7440−61−1	Uranium−238	59.0	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:42	210513−1	2117233
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:28	210513−3	2117233
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:28	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201011 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−BS10−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	28.4	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−36−0	Antimony	1.08	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−38−2	Arsenic	2.30	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−39−3	Barium	6.30	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−70−2	Calcium	15000	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7439−89−6	Iron	133	ug/L		33.0	100	100	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7439−95−4	Magnesium	6000	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7439−96−5	Manganese	262	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7439−98−7	Molybdenum	17.1	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−09−7	Potassium	2680	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−23−5	Sodium	13300	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−61−1	Total Uranium	29.0	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.203	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:44	210513−1	2117233
7440−61−1	Uranium−238	28.8	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:44	210513−1	2117233
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:32	210513−3	2117233
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:32	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201012 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−BS10−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−36−0	Antimony	1.26	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−38−2	Arsenic	2.16	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−39−3	Barium	6.47	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−70−2	Calcium	14900	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7439−89−6	Iron	114	ug/L		33.0	100	100	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7439−95−4	Magnesium	5920	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7439−96−5	Manganese	240	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7439−98−7	Molybdenum	17.6	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−09−7	Potassium	2660	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−23−5	Sodium	14000	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−61−1	Total Uranium	26.5	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.185	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:46	210513−1	2117233
7440−61−1	Uranium−238	26.3	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:46	210513−1	2117233
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:35	210513−3	2117233
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:35	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201013 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−T10−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	39.8	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−38−2	Arsenic	11.6	ug/L		2.00	5.00	5.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−39−3	Barium	6.52	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−70−2	Calcium	11200	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7439−89−6	Iron	172	ug/L		33.0	100	100	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7439−95−4	Magnesium	3650	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7439−96−5	Manganese	308	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7439−98−7	Molybdenum	10.7	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−09−7	Potassium	1880	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−23−5	Sodium	12200	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−61−1	Total Uranium	0.108	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:48	210513−1	2117233
7440−61−1	Uranium−238	0.108	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:48	210513−1	2117233
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:39	210513−3	2117233
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:39	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201014 **BASIS:** Filtered **DATE COLLECTED** 13-APR-21

CLIENT ID: MW-T10-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-38-2	Arsenic	11.1	ug/L		2.00	5.00	5.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-39-3	Barium	5.30	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-70-2	Calcium	11100	ug/L		80.0	200	200	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7439-89-6	Iron	83.2	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7439-95-4	Magnesium	3600	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7439-96-5	Manganese	227	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7439-98-7	Molybdenum	10.7	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-09-7	Potassium	1870	ug/L		80.0	300	300	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-23-5	Sodium	12000	ug/L		80.0	250	250	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-61-1	Total Uranium	0.0797	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:49	210513-1	2117233
7440-61-1	Uranium-238	0.0797	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:49	210513-1	2117233
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:43	210513-3	2117233
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:43	210513-3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201015 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: EQ Blank1−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−39−3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−70−2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7439−95−4	Magnesium	12.9	ug/L	J	10.0	30.0	30.0	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−09−7	Potassium	80.0	ug/L	U	80.0	300	300	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−23−5	Sodium	80.0	ug/L	U	80.0	250	250	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:51	210513−1	2117233
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:51	210513−1	2117233
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:46	210513−3	2117233
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:46	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201016 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: EQ Blank1−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−39−3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−70−2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	PRB	05/14/21 10:56	210514−4	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7439−89−6	Iron	44.0	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7439−95−4	Magnesium	10.0	ug/L	U	10.0	30.0	30.0	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−09−7	Potassium	80.0	ug/L	U	80.0	300	300	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−23−5	Sodium	80.0	ug/L	U	80.0	250	250	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:56	210513−1	2117233
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:56	210513−1	2117233
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:57	210513−3	2117233
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 07:57	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201017 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−BS13−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	48.8	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−36−0	Antimony	1.32	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−39−3	Barium	39.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−70−2	Calcium	39600	ug/L		800	2000	2000	10	MS	PRB	05/14/21 10:59	210514−4	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−50−8	Copper	1.90	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7439−89−6	Iron	82.3	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7439−92−1	Lead	4.28	ug/L		0.500	2.00	2.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7439−95−4	Magnesium	23900	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7439−96−5	Manganese	32.1	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7439−98−7	Molybdenum	1.26	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−02−0	Nickel	1.75	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−09−7	Potassium	20100	ug/L		80.0	300	300	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−23−5	Sodium	44400	ug/L		80.0	250	250	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−61−1	Total Uranium	35.2	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.250	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 22:58	210513−1	2117233
7440−61−1	Uranium−238	35.0	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 22:58	210513−1	2117233
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 08:01	210513−3	2117233
7440−66−6	Zinc	13.5	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 08:01	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201018 **BASIS:** Filtered **DATE COLLECTED** 13-APR-21

CLIENT ID: MW-BS13-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-36-0	Antimony	1.25	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-39-3	Barium	33.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-70-2	Calcium	203000	ug/L		800	2000	2000	10	MS	PRB	05/14/21 11:02	210514-4	2117233
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7439-95-4	Magnesium	23200	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7439-96-5	Manganese	24.6	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7439-98-7	Molybdenum	1.37	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-02-0	Nickel	1.48	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-09-7	Potassium	19600	ug/L		80.0	300	300	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-23-5	Sodium	43100	ug/L		80.0	250	250	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-61-1	Total Uranium	33.5	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.235	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 23:00	210513-1	2117233
7440-61-1	Uranium-238	33.3	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 23:00	210513-1	2117233
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 08:08	210513-3	2117233
7440-66-6	Zinc	3.86	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 08:08	210513-3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201019 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−S30−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−36−0	Antimony	1.27	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−39−3	Barium	16.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−70−2	Calcium	21500	ug/L		80.0	200	200	1	MS	PRB	05/14/21 11:06	210514−4	2117233
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7439−95−4	Magnesium	5210	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7439−96−5	Manganese	1.43	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−02−0	Nickel	0.778	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−09−7	Potassium	3090	ug/L		80.0	300	300	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−23−5	Sodium	21500	ug/L		80.0	250	250	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−61−1	Total Uranium	0.107	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 23:02	210513−1	2117233
7440−61−1	Uranium−238	0.107	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/13/21 23:02	210513−1	2117233
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 08:15	210513−3	2117233
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 08:15	210513−3	2117233

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117233	2117232	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541201 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541201020 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−S30−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	26.3	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−36−0	Antimony	1.36	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−39−3	Barium	17.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−70−2	Calcium	20900	ug/L		80.0	200	200	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−50−8	Copper	0.445	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7439−95−4	Magnesium	5360	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7439−96−5	Manganese	1.07	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7439−98−7	Molybdenum	0.235	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−02−0	Nickel	0.810	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−09−7	Potassium	3300	ug/L		80.0	300	300	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−23−5	Sodium	23000	ug/L		80.0	250	250	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:30	210513−1	2117235
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:30	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 13:42	210514−4	2117235
7440−66−6	Zinc	5.32	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 13:42	210514−4	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	101.2	90.0 − 110.0	MS	13−MAY−21 20:14	210513−1
	Uranium−238	51.8	ug/L	49.64	ug/L	104.3	90.0 − 110.0	MS	13−MAY−21 20:14	210513−1
	Aluminum	4940	ug/L	5050	ug/L	97.9	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Antimony	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Arsenic	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Barium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Beryllium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Cadmium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Chromium	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Cobalt	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Copper	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Iron	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Lead	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Magnesium	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Manganese	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Molybdenum	49.5	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Nickel	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Potassium	5150	ug/L	5000	ug/L	103	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Selenium	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Silver	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Sodium	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Thallium	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Thorium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Vanadium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Zinc	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	14−MAY−21 06:04	210513−3
	Aluminum	5010	ug/L	5050	ug/L	99.2	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Arsenic	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Barium	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Beryllium	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cadmium	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Calcium	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Chromium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Cobalt	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Copper	52.4	ug/L	50	ug/L	104.7	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Iron	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Lead	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Magnesium	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Manganese	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Molybdenum	48.2	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Nickel	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Potassium	5240	ug/L	5000	ug/L	104.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Selenium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Silver	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Sodium	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Thallium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Thorium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Vanadium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
	Zinc	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−4
CCV01										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.2	90.0 − 110.0	MS	13−MAY−21 20:23	210513−1
	Uranium−238	52.5	ug/L	49.64	ug/L	105.8	90.0 − 110.0	MS	13−MAY−21 20:23	210513−1
	Aluminum	5070	ug/L	5050	ug/L	100.4	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Arsenic	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Barium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Beryllium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Cadmium	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Calcium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Chromium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Cobalt	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Copper	52.7	ug/L	50	ug/L	105.4	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Iron	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Lead	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Magnesium	5240	ug/L	5000	ug/L	104.9	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Manganese	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Molybdenum	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Nickel	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Potassium	5300	ug/L	5000	ug/L	106	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Selenium	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Silver	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Sodium	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Thallium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Thorium	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Vanadium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Zinc	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	14−MAY−21 06:22	210513−3
	Aluminum	5020	ug/L	5050	ug/L	99.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Antimony	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Arsenic	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Barium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Beryllium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Cadmium	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Calcium	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Chromium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Cobalt	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Copper	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Magnesium	5040	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Manganese	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Molybdenum	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Nickel	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Selenium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Silver	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Sodium	5110	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Thallium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Thorium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Vanadium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
	Zinc	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	14−MAY−21 10:32	210514−4
CCV02										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.7	90.0 − 110.0	MS	13−MAY−21 20:43	210513−1
	Uranium−238	51.8	ug/L	49.64	ug/L	104.3	90.0 − 110.0	MS	13−MAY−21 20:43	210513−1
	Aluminum	5010	ug/L	5050	ug/L	99.3	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Antimony	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Arsenic	48.6	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Barium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Beryllium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Cadmium	48.3	ug/L	50	ug/L	96.7	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Calcium	4880	ug/L	5000	ug/L	97.7	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Chromium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Cobalt	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Copper	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Iron	4910	ug/L	5000	ug/L	98.3	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Lead	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Magnesium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Manganese	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Molybdenum	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Nickel	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Potassium	5220	ug/L	5000	ug/L	104.5	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Selenium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Silver	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Sodium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thallium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Thorium	54.5	ug/L	50	ug/L	109.1	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Vanadium	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Zinc	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	14−MAY−21 06:33	210513−3
	Aluminum	5090	ug/L	5050	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Antimony	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Arsenic	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Barium	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Beryllium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Cadmium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Calcium	5040	ug/L	5000	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Chromium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Cobalt	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Copper	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Lead	52.8	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Magnesium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Manganese	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Molybdenum	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Nickel	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Potassium	5340	ug/L	5000	ug/L	106.7	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Selenium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Silver	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Sodium	5180	ug/L	5000	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Thallium	52.1	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Thorium	56.4	ug/L	50	ug/L	112.9	90.0 − 110.0 *	MS	14−MAY−21 10:42	210514−4
	Vanadium	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
	Zinc	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	14−MAY−21 10:42	210514−4
CCV03										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.9	90.0 − 110.0	MS	13−MAY−21 22:16	210513−1
	Uranium−238	52.9	ug/L	49.64	ug/L	106.5	90.0 − 110.0	MS	13−MAY−21 22:16	210513−1

METALS
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Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Aluminum	4820	ug/L	5050	ug/L	95.5	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Antimony	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Arsenic	47.9	ug/L	50	ug/L	95.7	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Barium	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Beryllium	48.3	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Cadmium	47.5	ug/L	50	ug/L	95	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Calcium	4770	ug/L	5000	ug/L	95.4	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Chromium	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Cobalt	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Copper	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Iron	4830	ug/L	5000	ug/L	96.7	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Lead	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Magnesium	4960	ug/L	5000	ug/L	99.3	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Manganese	48	ug/L	50	ug/L	96	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Molybdenum	47.6	ug/L	50	ug/L	95.1	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Nickel	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Potassium	5010	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Selenium	47.5	ug/L	50	ug/L	95	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Silver	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Sodium	4830	ug/L	5000	ug/L	96.6	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Thorium	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Vanadium	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Zinc	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	14−MAY−21 07:09	210513−3
	Aluminum	5100	ug/L	5050	ug/L	101	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Antimony	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Arsenic	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Barium	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Beryllium	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Cadmium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4

METALS
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Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Chromium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Cobalt	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Copper	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Iron	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Lead	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Manganese	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Molybdenum	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Nickel	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Potassium	5360	ug/L	5000	ug/L	107.2	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Selenium	48.7	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Silver	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Sodium	5260	ug/L	5000	ug/L	105.2	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Thallium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Thorium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Vanadium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
	Zinc	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	14−MAY−21 11:22	210514−4
CCV04										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.3	90.0 − 110.0	MS	13−MAY−21 22:33	210513−1
	Uranium−238	51.9	ug/L	49.64	ug/L	104.5	90.0 − 110.0	MS	13−MAY−21 22:33	210513−1
	Aluminum	4630	ug/L	5050	ug/L	91.7	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Antimony	48.1	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Arsenic	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Barium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Beryllium	47.9	ug/L	50	ug/L	95.8	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Cadmium	48	ug/L	50	ug/L	95.9	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Calcium	4570	ug/L	5000	ug/L	91.4	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Chromium	46.1	ug/L	50	ug/L	92.1	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Cobalt	46.7	ug/L	50	ug/L	93.4	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Copper	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Iron	4660	ug/L	5000	ug/L	93.3	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Lead	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Magnesium	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Manganese	46.3	ug/L	50	ug/L	92.6	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Molybdenum	48.4	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Nickel	47.6	ug/L	50	ug/L	95.2	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Potassium	4800	ug/L	5000	ug/L	96	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Selenium	47.3	ug/L	50	ug/L	94.7	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Silver	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Sodium	4700	ug/L	5000	ug/L	94	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Thallium	50.1	ug/L	50	ug/L	100.3	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Thorium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Vanadium	46.2	ug/L	50	ug/L	92.4	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Zinc	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	14−MAY−21 07:50	210513−3
	Aluminum	4730	ug/L	5050	ug/L	93.6	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Antimony	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Barium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Beryllium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Cadmium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Calcium	4720	ug/L	5000	ug/L	94.3	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Chromium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Cobalt	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Copper	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Iron	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Lead	52.4	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Magnesium	4860	ug/L	5000	ug/L	97.1	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Manganese	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Molybdenum	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Nickel	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Potassium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Selenium	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4

METALS
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Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Silver	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Sodium	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Thallium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Thorium	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Vanadium	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
	Zinc	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	14−MAY−21 13:29	210514−4
CCV05										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.6	90.0 − 110.0	MS	13−MAY−21 22:53	210513−1
	Uranium−238	53	ug/L	49.64	ug/L	106.8	90.0 − 110.0	MS	13−MAY−21 22:53	210513−1
	Aluminum	4530	ug/L	5050	ug/L	89.8	90.0 − 110.0 *	MS	14−MAY−21 08:33	210513−3
	Antimony	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Arsenic	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Barium	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Beryllium	47.2	ug/L	50	ug/L	94.4	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Cadmium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Calcium	4470	ug/L	5000	ug/L	89.4	90.0 − 110.0 *	MS	14−MAY−21 08:33	210513−3
	Chromium	45.9	ug/L	50	ug/L	91.9	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Cobalt	45.5	ug/L	50	ug/L	90.9	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Copper	47.4	ug/L	50	ug/L	94.8	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Iron	4620	ug/L	5000	ug/L	92.5	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Lead	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Magnesium	4710	ug/L	5000	ug/L	94.2	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Manganese	45.7	ug/L	50	ug/L	91.3	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Molybdenum	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Nickel	46.1	ug/L	50	ug/L	92.3	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Potassium	4710	ug/L	5000	ug/L	94.2	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Selenium	48.4	ug/L	50	ug/L	96.8	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Silver	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Sodium	4630	ug/L	5000	ug/L	92.5	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Thallium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Thorium	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Vanadium	46.4	ug/L	50	ug/L	92.8	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Zinc	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	14−MAY−21 08:33	210513−3
	Aluminum	4720	ug/L	5050	ug/L	93.4	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Antimony	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Arsenic	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Barium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Beryllium	48.5	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Cadmium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Calcium	4780	ug/L	5000	ug/L	95.6	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Chromium	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Cobalt	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Copper	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Iron	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Lead	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Magnesium	4860	ug/L	5000	ug/L	97.3	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Manganese	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Molybdenum	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Nickel	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Potassium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Selenium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Silver	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Sodium	4890	ug/L	5000	ug/L	97.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Thallium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Thorium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Vanadium	47.7	ug/L	50	ug/L	95.4	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
	Zinc	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	14−MAY−21 14:06	210514−4
CCV06										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.6	90.0 − 110.0	MS	13−MAY−21 23:11	210513−1
	Uranium−238	53.3	ug/L	49.64	ug/L	107.4	90.0 − 110.0	MS	13−MAY−21 23:11	210513−1

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0013	ug/L	.0014	ug/L	92.9	80.0 − 120.0	MS	13−MAY−21 20:18	210513−1
	Uranium−238	.217	ug/L	.2	ug/L	108.5	80.0 − 120.0	MS	13−MAY−21 20:18	210513−1
	Aluminum	52.7	ug/L	50	ug/L	105.3	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Antimony	3.03	ug/L	3	ug/L	100.8	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Arsenic	4.83	ug/L	5	ug/L	96.5	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Barium	3.99	ug/L	4	ug/L	99.9	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Beryllium	.482	ug/L	.5	ug/L	96.4	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Cadmium	.938	ug/L	1	ug/L	93.8	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Calcium	254	ug/L	200	ug/L	126.9	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Chromium	10.1	ug/L	10	ug/L	100.9	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Cobalt	1.04	ug/L	1	ug/L	104.2	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Copper	2.1	ug/L	2	ug/L	105	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Iron	100	ug/L	100	ug/L	100	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Lead	2.16	ug/L	2	ug/L	108.2	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Magnesium	30.9	ug/L	30	ug/L	103	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Manganese	4.95	ug/L	5	ug/L	99.1	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Molybdenum	1.04	ug/L	1	ug/L	103.7	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Nickel	2.11	ug/L	2	ug/L	105.3	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Potassium	324	ug/L	300	ug/L	108.2	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Selenium	5.02	ug/L	5	ug/L	100.4	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Silver	1.01	ug/L	1	ug/L	100.7	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Sodium	259	ug/L	250	ug/L	103.7	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Thallium	2.04	ug/L	2	ug/L	101.8	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Thorium	2.18	ug/L	2	ug/L	109	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Vanadium	20	ug/L	20	ug/L	100.1	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Zinc	20.2	ug/L	20	ug/L	100.8	80.0 − 120.0	MS	14−MAY−21 06:11	210513−3
	Aluminum	52.1	ug/L	50	ug/L	104.2	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Antimony	3.13	ug/L	3	ug/L	104.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Arsenic	4.98	ug/L	5	ug/L	99.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Barium	4.24	ug/L	4	ug/L	105.9	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Beryllium	.501	ug/L	.5	ug/L	100.2	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Cadmium	.974	ug/L	1	ug/L	97.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
	Calcium	256	ug/L	200	ug/L	128	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Chromium	10.2	ug/L	10	ug/L	102.2	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Cobalt	1.04	ug/L	1	ug/L	103.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Copper	2.19	ug/L	2	ug/L	109.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Iron	103	ug/L	100	ug/L	103.3	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Lead	2.15	ug/L	2	ug/L	107.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Magnesium	32.4	ug/L	30	ug/L	107.9	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Manganese	5.12	ug/L	5	ug/L	102.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Molybdenum	1.05	ug/L	1	ug/L	104.8	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Nickel	2.12	ug/L	2	ug/L	106.1	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Potassium	322	ug/L	300	ug/L	107.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Selenium	5.14	ug/L	5	ug/L	102.8	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Silver	1.03	ug/L	1	ug/L	102.8	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Sodium	258	ug/L	250	ug/L	103.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Thallium	2.07	ug/L	2	ug/L	103.6	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Thorium	2.22	ug/L	2	ug/L	110.8	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Vanadium	19.8	ug/L	20	ug/L	99.2	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4
	Zinc	20.3	ug/L	20	ug/L	101.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−4

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	13−MAY−21 20:16	210513−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	13−MAY−21 20:16	210513−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	14−MAY−21 06:08	210513−3
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	14−MAY−21 06:08	210513−3
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	14−MAY−21 06:08	210513−3
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	14−MAY−21 06:08	210513−3
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	14−MAY−21 06:08	210513−3
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	14−MAY−21 06:08	210513−3
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	14−MAY−21 10:19	210514−4

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	14−MAY−21 10:19	210514−4
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	14−MAY−21 10:19	210514−4
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	14−MAY−21 10:19	210514−4
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	14−MAY−21 10:19	210514−4
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	14−MAY−21 10:19	210514−4
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	14−MAY−21 10:19	210514−4
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 20:25	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 20:25	210513−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 06:26	210513−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 06:26	210513−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 06:26	210513−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 06:26	210513−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Molybdenum	0.808	+/−1	J	0.2	1.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 06:26	210513−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 06:26	210513−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 06:26	210513−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 10:36	210514−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 10:36	210514−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 10:36	210514−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Molybdenum	0.668	+/−1	J	0.2	1.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 10:36	210514−4

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 10:36	210514−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 10:36	210514−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 10:36	210514−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 10:36	210514−4
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 20:45	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 20:45	210513−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 06:37	210513−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 06:37	210513−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 06:37	210513−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Molybdenum	0.584	+/−1	J	0.2	1.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 06:37	210513−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 06:37	210513−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 06:37	210513−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 10:46	210514−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 10:46	210514−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 10:46	210514−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Molybdenum	0.561	+/−1	J	0.2	1.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 10:46	210514−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 10:46	210514−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 10:46	210514−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 10:46	210514−4
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 22:17	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 22:17	210513−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 07:13	210513−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 07:13	210513−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 07:13	210513−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 07:13	210513−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 07:13	210513−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 07:13	210513−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 11:25	210514−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 11:25	210514−4

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 11:25	210514−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 11:25	210514−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 11:25	210514−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 11:25	210514−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 11:25	210514−4
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 22:35	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 22:35	210513−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 07:53	210513−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 07:53	210513−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 07:53	210513−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 07:53	210513−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 07:53	210513−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 07:53	210513−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 13:32	210514−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 13:32	210514−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 13:32	210514−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 13:32	210514−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 13:32	210514−4

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 13:32	210514−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 13:32	210514−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 13:32	210514−4
CCB05										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 22:55	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 22:55	210513−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 08:37	210513−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 08:37	210513−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 08:37	210513−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 08:37	210513−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 08:37	210513−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 08:37	210513−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 08:37	210513−3
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 14:09	210514−4
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 14:09	210514−4
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 14:09	210514−4
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 14:09	210514−4
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 14:09	210514−4
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 14:09	210514−4
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 14:09	210514−4
CCB06										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 23:12	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 23:12	210513−1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541201

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run

SW846

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541201
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204799699								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.307	ug/L	+/−0.5	BJ	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.775	ug/L	+/−1	BJ	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
1204799704								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541201

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0001	ug/L					13−MAY−21 20:20	210513−1
	Uranium−238	0.02	ug/L					13−MAY−21 20:20	210513−1
ICSAB01									
	Uranium−235	0.139	ug/L	.145	ug/L	95.5	80.0 − 120.0	13−MAY−21 20:21	210513−1
	Uranium−238	19.8	ug/L	19.86	ug/L	99.8	80.0 − 120.0	13−MAY−21 20:21	210513−1

METALS
−4−
Interference Check Sample

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	97200	ug/L	100000	ug/L	97.3	80.0 − 120.0	14−MAY−21 06:15	210513−3
	Antimony	0.131	ug/L					14−MAY−21 06:15	210513−3
	Arsenic	0.116	ug/L					14−MAY−21 06:15	210513−3
	Barium	2.65	ug/L					14−MAY−21 06:15	210513−3
	Beryllium	0.006	ug/L					14−MAY−21 06:15	210513−3
	Cadmium	0.896	ug/L					14−MAY−21 06:15	210513−3
	Calcium	93100	ug/L	100000	ug/L	93.1	80.0 − 120.0	14−MAY−21 06:15	210513−3
	Chromium	0.735	ug/L					14−MAY−21 06:15	210513−3
	Cobalt	0.473	ug/L					14−MAY−21 06:15	210513−3
	Copper	0.01	ug/L					14−MAY−21 06:15	210513−3
	Iron	88100	ug/L	100000	ug/L	88.1	80.0 − 120.0	14−MAY−21 06:15	210513−3
	Lead	0.189	ug/L					14−MAY−21 06:15	210513−3
	Magnesium	96300	ug/L	100000	ug/L	96.3	80.0 − 120.0	14−MAY−21 06:15	210513−3
	Manganese	6.93	ug/L					14−MAY−21 06:15	210513−3
	Molybdenum	1960	ug/L	2000	ug/L	98.1	80.0 − 120.0	14−MAY−21 06:15	210513−3
	Nickel	0.259	ug/L					14−MAY−21 06:15	210513−3
	Potassium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	14−MAY−21 06:15	210513−3
	Selenium	0.306	ug/L					14−MAY−21 06:15	210513−3
	Silver	0.066	ug/L					14−MAY−21 06:15	210513−3
	Sodium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	14−MAY−21 06:15	210513−3
	Thallium	0.076	ug/L					14−MAY−21 06:15	210513−3
	Thorium	2.14	ug/L					14−MAY−21 06:15	210513−3
	Vanadium	−0.096	ug/L					14−MAY−21 06:15	210513−3
	Zinc	0.916	ug/L					14−MAY−21 06:15	210513−3
ICSAB01									
	Aluminum	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Antimony	20.8	ug/L	20	ug/L	104	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Arsenic	20.7	ug/L	20	ug/L	104	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Barium	21.4	ug/L	22.35	ug/L	95.7	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Beryllium	18.4	ug/L	20	ug/L	92.1	80.0 − 120.0	14−MAY−21 06:19	210513−3

METALS
−4−
Interference Check Sample

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cadmium	19.7	ug/L	20.72	ug/L	95.1	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Calcium	90500	ug/L	100000	ug/L	90.5	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Chromium	19.3	ug/L	20	ug/L	96.7	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Cobalt	19.1	ug/L	20.65	ug/L	92.5	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Copper	17.5	ug/L	20	ug/L	87.2	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Iron	85600	ug/L	100000	ug/L	85.6	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Lead	19.3	ug/L	20	ug/L	96.5	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Magnesium	93100	ug/L	100000	ug/L	93.1	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Manganese	25.2	ug/L	25.72	ug/L	98	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Molybdenum	1990	ug/L	2000	ug/L	99.7	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Nickel	18.3	ug/L	20	ug/L	91.3	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Potassium	98900	ug/L	100000	ug/L	98.9	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Selenium	20.4	ug/L	20	ug/L	102	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Silver	18.3	ug/L	20	ug/L	91.4	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Sodium	98400	ug/L	100000	ug/L	98.4	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Thallium	18.5	ug/L	20	ug/L	92.6	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Thorium	21.5	ug/L	20	ug/L	108	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Vanadium	19.6	ug/L	20	ug/L	98.1	80.0 − 120.0	14−MAY−21 06:19	210513−3
	Zinc	20.3	ug/L	20	ug/L	102	80.0 − 120.0	14−MAY−21 06:19	210513−3

METALS
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Interference Check Sample

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	92600	ug/L	100000	ug/L	92.6	80.0 − 120.0	14−MAY−21 10:26	210514−4
	Antimony	0.162	ug/L					14−MAY−21 10:26	210514−4
	Arsenic	0.128	ug/L					14−MAY−21 10:26	210514−4
	Barium	2.78	ug/L					14−MAY−21 10:26	210514−4
	Beryllium	0.014	ug/L					14−MAY−21 10:26	210514−4
	Cadmium	0.961	ug/L					14−MAY−21 10:26	210514−4
	Calcium	91700	ug/L	100000	ug/L	91.7	80.0 − 120.0	14−MAY−21 10:26	210514−4
	Chromium	0.715	ug/L					14−MAY−21 10:26	210514−4
	Cobalt	0.481	ug/L					14−MAY−21 10:26	210514−4
	Copper	0.189	ug/L					14−MAY−21 10:26	210514−4
	Iron	87400	ug/L	100000	ug/L	87.4	80.0 − 120.0	14−MAY−21 10:26	210514−4
	Lead	0.181	ug/L					14−MAY−21 10:26	210514−4
	Magnesium	91000	ug/L	100000	ug/L	91.1	80.0 − 120.0	14−MAY−21 10:26	210514−4
	Manganese	6.05	ug/L					14−MAY−21 10:26	210514−4
	Molybdenum	1940	ug/L	2000	ug/L	97.1	80.0 − 120.0	14−MAY−21 10:26	210514−4
	Nickel	0.278	ug/L					14−MAY−21 10:26	210514−4
	Potassium	98700	ug/L	100000	ug/L	98.7	80.0 − 120.0	14−MAY−21 10:26	210514−4
	Selenium	0.197	ug/L					14−MAY−21 10:26	210514−4
	Silver	0.071	ug/L					14−MAY−21 10:26	210514−4
	Sodium	99300	ug/L	100000	ug/L	99.3	80.0 − 120.0	14−MAY−21 10:26	210514−4
	Thallium	0.09	ug/L					14−MAY−21 10:26	210514−4
	Thorium	2.1	ug/L					14−MAY−21 10:26	210514−4
	Vanadium	−0.063	ug/L					14−MAY−21 10:26	210514−4
	Zinc	0.837	ug/L					14−MAY−21 10:26	210514−4
ICSAB01									
	Aluminum	95400	ug/L	100000	ug/L	95.4	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Antimony	21.3	ug/L	20	ug/L	106	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Arsenic	20.6	ug/L	20	ug/L	103	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Barium	21.9	ug/L	22.35	ug/L	98.2	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Beryllium	19.6	ug/L	20	ug/L	98.1	80.0 − 120.0	14−MAY−21 10:29	210514−4

METALS
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Interference Check Sample

SDG No: 541201

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cadmium	20.2	ug/L	20.72	ug/L	97.7	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Calcium	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Chromium	20.1	ug/L	20	ug/L	101	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Cobalt	19.8	ug/L	20.65	ug/L	96	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Copper	18.0	ug/L	20	ug/L	90.2	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Iron	87800	ug/L	100000	ug/L	87.8	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Lead	19.3	ug/L	20	ug/L	96.7	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Magnesium	94400	ug/L	100000	ug/L	94.4	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Manganese	25.6	ug/L	25.72	ug/L	99.4	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Molybdenum	1970	ug/L	2000	ug/L	98.6	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Nickel	18.9	ug/L	20	ug/L	94.5	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Potassium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Selenium	20.7	ug/L	20	ug/L	104	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Silver	18.5	ug/L	20	ug/L	92.6	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Sodium	102000	ug/L	100000	ug/L	102	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Thallium	19.1	ug/L	20	ug/L	95.5	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Thorium	21.6	ug/L	20	ug/L	108	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Vanadium	19.8	ug/L	20	ug/L	99.1	80.0 − 120.0	14−MAY−21 10:29	210514−4
	Zinc	19.1	ug/L	20	ug/L	95.7	80.0 − 120.0	14−MAY−21 10:29	210514−4

METALS
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Matrix Spike Summary

SDG NO. 541201 **Client ID** MW−S30−04132021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201019 **Spike ID:** 1204799701

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	1970		19.3	U	2000	97.9		MS
Antimony	ug/L	75−125	53.3		1.27	J	50.0	104		MS
Arsenic	ug/L	75−125	49.1		2.00	U	50.0	97		MS
Barium	ug/L	75−125	66.1		16.8		50.0	98.5		MS
Beryllium	ug/L	75−125	55.4		0.200	U	50.0	111		MS
Cadmium	ug/L	75−125	49.2		0.300	U	50.0	98.4		MS
Calcium	ug/L		24200		21500		2000	138	N/A	MS
Chromium	ug/L	75−125	46.9		3.00	U	50.0	93.3		MS
Cobalt	ug/L	75−125	45.7		0.300	U	50.0	91.1		MS
Copper	ug/L	75−125	45.7		0.300	U	50.0	91.3		MS
Iron	ug/L	75−125	1860		33.0	U	2000	91.9		MS
Lead	ug/L	75−125	52.3		0.500	U	50.0	105		MS
Magnesium	ug/L	75−125	7290		5210		2000	104		MS
Manganese	ug/L	75−125	46.9		1.43	J	50.0	91		MS
Molybdenum	ug/L	75−125	51.3		0.200	U	50.0	102		MS
Nickel	ug/L	75−125	45.9		0.778	J	50.0	90.2		MS
Potassium	ug/L	75−125	5130		3090		2000	102		MS
Selenium	ug/L	75−125	48.8		2.00	U	50.0	97.2		MS
Silver	ug/L	75−125	49.8		0.300	U	50.0	99.6		MS
Sodium	ug/L		23500		21500		2000	100	N/A	MS
Thallium	ug/L	75−125	50.8		0.600	U	50.0	102		MS
Thorium	ug/L	75−125	52.8		0.700	U	50.0	106		MS

METALS
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Matrix Spike Summary

SDG NO. 541201 **Client ID** MW−S30−04132021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201019 **Spike ID:** 1204799701

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.387		0.0100	U	0.360	107		MS
Uranium−238	ug/L	75−125	54.7		0.107	J	49.6	110		MS
Vanadium	ug/L	75−125	48.8		3.30	U	50.0	95.4		MS
Zinc	ug/L	75−125	49.4		3.30	U	50.0	92.8		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541201 **Client ID** MW−S30−04132021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201019 **Spike ID:** 1204799702

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2010		19.3	U	2000	99.5		MS
Antimony	ug/L	75−125	52.7		1.27	J	50.0	103		MS
Arsenic	ug/L	75−125	48.4		2.00	U	50.0	95.6		MS
Barium	ug/L	75−125	66.5		16.8		50.0	99.3		MS
Beryllium	ug/L	75−125	55.1		0.200	U	50.0	110		MS
Cadmium	ug/L	75−125	50.0		0.300	U	50.0	100		MS
Calcium	ug/L		24100		21500		2000	131	N/A	MS
Chromium	ug/L	75−125	46.4		3.00	U	50.0	92.2		MS
Cobalt	ug/L	75−125	47.5		0.300	U	50.0	94.8		MS
Copper	ug/L	75−125	48.3		0.300	U	50.0	96.5		MS
Iron	ug/L	75−125	1900		33.0	U	2000	93.9		MS
Lead	ug/L	75−125	52.3		0.500	U	50.0	105		MS
Magnesium	ug/L	75−125	7420		5210		2000	111		MS
Manganese	ug/L	75−125	47.5		1.43	J	50.0	92.2		MS
Molybdenum	ug/L	75−125	52.8		0.200	U	50.0	105		MS
Nickel	ug/L	75−125	47.6		0.778	J	50.0	93.6		MS
Potassium	ug/L	75−125	5180		3090		2000	104		MS
Selenium	ug/L	75−125	47.5		2.00	U	50.0	94.6		MS
Silver	ug/L	75−125	51.0		0.300	U	50.0	102		MS
Sodium	ug/L		24200		21500		2000	139	N/A	MS
Thallium	ug/L	75−125	50.0		0.600	U	50.0	100		MS
Thorium	ug/L	75−125	53.5		0.700	U	50.0	107		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541201 **Client ID** MW−S30−04132021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201019 **Spike ID:** 1204799702

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.378		0.0100	U	0.360	105		MS
Uranium−238	ug/L	75−125	53.9		0.107	J	49.6	108		MS
Vanadium	ug/L	75−125	48.5		3.30	U	50.0	94.7		MS
Zinc	ug/L	75−125	51.2		3.30	U	50.0	96.4		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Summary

SDG NO. 541201 **Client ID** MW−S30−04132021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201020 **Spike ID:** 1204799706

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Manganese	ug/L	75−125	50.2		1.07	J	50.0	98.2		MS
Molybdenum	ug/L	75−125	54.0		0.235	J	50.0	107		MS
Nickel	ug/L	75−125	49.5		0.810	J	50.0	97.3		MS
Potassium	ug/L	75−125	5290		3300		2000	99.3		MS
Selenium	ug/L	75−125	51.4		2.00	U	50.0	103		MS
Silver	ug/L	75−125	54.0		0.300	U	50.0	108		MS
Sodium	ug/L		24400		23000		2000	68.3	N/A	MS
Thallium	ug/L	75−125	52.3		0.600	U	50.0	104		MS
Thorium	ug/L	75−125	54.2		0.700	U	50.0	108		MS
Uranium−235	ug/L	75−125	0.374		0.0100	U	0.360	104		MS
Uranium−238	ug/L	75−125	53.7		0.0670	U	49.6	108		MS
Vanadium	ug/L	75−125	50.0		3.30	U	50.0	97.7		MS
Zinc	ug/L	75−125	51.9		5.32	J	50.0	93.1		MS
Aluminum	ug/L	75−125	2010		26.3	J	2000	99.4		MS
Antimony	ug/L	75−125	56.6		1.36	J	50.0	111		MS
Arsenic	ug/L	75−125	51.1		2.00	U	50.0	101		MS
Barium	ug/L	75−125	70.9		17.8		50.0	106		MS
Beryllium	ug/L	75−125	56.6		0.200	U	50.0	113		MS
Cadmium	ug/L	75−125	52.6		0.300	U	50.0	105		MS
Calcium	ug/L		22300		20900		2000	69.8	N/A	MS
Chromium	ug/L	75−125	48.9		3.00	U	50.0	97.1		MS
Cobalt	ug/L	75−125	48.8		0.300	U	50.0	97.4		MS

METALS
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Matrix Spike Summary

SDG NO. 541201 **Client ID** MW−S30−04132021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201020 **Spike ID:** 1204799706

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Copper	ug/L	75−125	49.6		0.445	J	50.0	98.2		MS
Iron	ug/L	75−125	1950		33.0	U	2000	96.3		MS
Lead	ug/L	75−125	54.1		0.500	U	50.0	108		MS
Magnesium	ug/L	75−125	7220		5360		2000	93		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541201 **Client ID** MW−S30−04132021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201020 **Spike ID:** 1204799707

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Lead	ug/L	75−125	53.6		0.500	U	50.0	107		MS
Magnesium	ug/L	75−125	7230		5360		2000	93.4		MS
Manganese	ug/L	75−125	48.8		1.07	J	50.0	95.5		MS
Molybdenum	ug/L	75−125	52.9		0.235	J	50.0	105		MS
Nickel	ug/L	75−125	48.8		0.810	J	50.0	96		MS
Potassium	ug/L	75−125	5270		3300		2000	98.3		MS
Selenium	ug/L	75−125	51.8		2.00	U	50.0	104		MS
Silver	ug/L	75−125	54.1		0.300	U	50.0	108		MS
Sodium	ug/L		23500		23000		2000	20.7	N/A	MS
Thallium	ug/L	75−125	51.4		0.600	U	50.0	103		MS
Thorium	ug/L	75−125	53.8		0.700	U	50.0	107		MS
Uranium−235	ug/L	75−125	0.379		0.0100	U	0.360	105		MS
Uranium−238	ug/L	75−125	54.3		0.0670	U	49.6	109		MS
Vanadium	ug/L	75−125	49.2		3.30	U	50.0	96.2		MS
Zinc	ug/L	75−125	52.1		5.32	J	50.0	93.5		MS
Aluminum	ug/L	75−125	2020		26.3	J	2000	99.7		MS
Antimony	ug/L	75−125	55.9		1.36	J	50.0	109		MS
Arsenic	ug/L	75−125	50.9		2.00	U	50.0	101		MS
Barium	ug/L	75−125	69.2		17.8		50.0	103		MS
Beryllium	ug/L	75−125	57.1		0.200	U	50.0	114		MS
Cadmium	ug/L	75−125	52.8		0.300	U	50.0	105		MS
Calcium	ug/L		22100		20900		2000	60.7	N/A	MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 541201 **Client ID** MW−S30−04132021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201020 **Spike ID:** 1204799707

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Chromium	ug/L	75−125	48.8		3.00	U	50.0	96.8		MS
Cobalt	ug/L	75−125	47.9		0.300	U	50.0	95.6		MS
Copper	ug/L	75−125	49.3		0.445	J	50.0	97.7		MS
Iron	ug/L	75−125	1940		33.0	U	2000	95.8		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 541201 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S30−04132021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799701 **Duplicate ID:** 1204799702 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	1970		2010		1.63		MS
Antimony	ug/L	+/−20	53.3		52.7		.998		MS
Arsenic	ug/L	+/−20	49.1		48.4		1.45		MS
Barium	ug/L	+/−20	66.1		66.5		.623		MS
Beryllium	ug/L	+/−20	55.4		55.1		.454		MS
Cadmium	ug/L	+/−20	49.2		50.0		1.55		MS
Calcium	ug/L	+/−20	24200		24100		.557		MS
Chromium	ug/L	+/−20	46.9		46.4		1.13		MS
Cobalt	ug/L	+/−20	45.7		47.5		3.94		MS
Copper	ug/L	+/−20	45.7		48.3		5.52		MS
Iron	ug/L	+/−20	1860		1900		2.19		MS
Lead	ug/L	+/−20	52.3		52.3		.0975		MS
Magnesium	ug/L	+/−20	7290		7420		1.79		MS
Manganese	ug/L	+/−20	46.9		47.5		1.25		MS
Molybdenum	ug/L	+/−20	51.3		52.8		2.87		MS
Nickel	ug/L	+/−20	45.9		47.6		3.65		MS
Potassium	ug/L	+/−20	5130		5180		.912		MS
Selenium	ug/L	+/−20	48.8		47.5		2.73		MS
Silver	ug/L	+/−20	49.8		51.0		2.34		MS
Sodium	ug/L	+/−20	23500		24200		3.19		MS
Thallium	ug/L	+/−20	50.8		50.0		1.61		MS
Thorium	ug/L	+/−20	52.8		53.5		1.26		MS
Uranium−235	ug/L	+/−20	0.387		0.378		2.35		MS
Uranium−238	ug/L	+/−20	54.7		53.9		1.54		MS
Vanadium	ug/L	+/−20	48.8		48.5		.691		MS
Zinc	ug/L	+/−20	49.4		51.2		3.63		MS

Metals
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Duplicate Sample Summary

SDG No.: 541201 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S30−04132021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799701 **Duplicate ID:** 1204799702 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

Metals
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Duplicate Sample Summary

SDG No.: 541201 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S30−04132021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799706 **Duplicate ID:** 1204799707 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2010		2020		.367		MS
Antimony	ug/L	+/−20	56.6		55.9		1.34		MS
Arsenic	ug/L	+/−20	51.1		50.9		.441		MS
Barium	ug/L	+/−20	70.9		69.2		2.53		MS
Beryllium	ug/L	+/−20	56.6		57.1		.964		MS
Cadmium	ug/L	+/−20	52.6		52.8		.319		MS
Calcium	ug/L	+/−20	22300		22100		.819		MS
Chromium	ug/L	+/−20	48.9		48.8		.336		MS
Cobalt	ug/L	+/−20	48.8		47.9		1.82		MS
Copper	ug/L	+/−20	49.6		49.3		.593		MS
Iron	ug/L	+/−20	1950		1940		.503		MS
Lead	ug/L	+/−20	54.1		53.6		.843		MS
Magnesium	ug/L	+/−20	7220		7230		.124		MS
Manganese	ug/L	+/−20	50.2		48.8		2.73		MS
Molybdenum	ug/L	+/−20	54.0		52.9		2.07		MS
Nickel	ug/L	+/−20	49.5		48.8		1.34		MS
Potassium	ug/L	+/−20	5290		5270		.371		MS
Selenium	ug/L	+/−20	51.4		51.8		.697		MS
Silver	ug/L	+/−20	54.0		54.1		.235		MS
Sodium	ug/L	+/−20	24400		23500		3.97		MS
Thallium	ug/L	+/−20	52.3		51.4		1.61		MS
Thorium	ug/L	+/−20	54.2		53.8		.891		MS
Uranium−235	ug/L	+/−20	0.374		0.379		1.46		MS
Uranium−238	ug/L	+/−20	53.7		54.3		1.11		MS
Vanadium	ug/L	+/−20	50.0		49.2		1.45		MS
Zinc	ug/L	+/−20	51.9		52.1		.416		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 541201 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S30−04132021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799706 **Duplicate ID:** 1204799707 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 541201

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799700								
	Antimony	ug/L	50.0	49.7		99.4	80−120	MS
	Arsenic	ug/L	50.0	46.1		92.2	80−120	MS
	Barium	ug/L	50.0	48.3		96.6	80−120	MS
	Beryllium	ug/L	50.0	56.5		113	80−120	MS
	Cadmium	ug/L	50.0	47.4		94.9	80−120	MS
	Calcium	ug/L	2000	2230		112	80−120	MS
	Chromium	ug/L	50.0	46.7		93.3	80−120	MS
	Cobalt	ug/L	50.0	47.6		95.1	80−120	MS
	Copper	ug/L	50.0	48.9		97.9	80−120	MS
	Iron	ug/L	2000	1900		95.1	80−120	MS
	Lead	ug/L	50.0	51.6		103	80−120	MS
	Magnesium	ug/L	2000	2130		106	80−120	MS
	Manganese	ug/L	50.0	46.6		93.2	80−120	MS
	Aluminum	ug/L	2000	2040		102	80−120	MS
	Molybdenum	ug/L	50.0	49.2		98.4	80−120	MS
	Nickel	ug/L	50.0	48.0		95.9	80−120	MS
	Potassium	ug/L	2000	2120		106	80−120	MS
	Selenium	ug/L	50.0	47.9		95.9	80−120	MS
	Silver	ug/L	50.0	50.5		101	80−120	MS
	Sodium	ug/L	2000	2130		107	80−120	MS
	Thallium	ug/L	50.0	50.4		101	80−120	MS
	Thorium	ug/L	50.0	51.3		103	80−120	MS
	Uranium−235	ug/L	0.360	0.361		100	80−120	MS
	Uranium−238	ug/L	49.6	51.9		104	80−120	MS
	Vanadium	ug/L	50.0	48.1		96.1	80−120	MS
	Zinc	ug/L	50.0	48.5		96.9	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 541201

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799705								
	Aluminum	ug/L	2000	2010		101	80−120	MS
	Antimony	ug/L	50.0	51.0		102	80−120	MS
	Arsenic	ug/L	50.0	47.4		94.9	80−120	MS
	Barium	ug/L	50.0	50.7		101	80−120	MS
	Beryllium	ug/L	50.0	57.3		115	80−120	MS
	Cadmium	ug/L	50.0	49.2		98.4	80−120	MS
	Calcium	ug/L	2000	2090		105	80−120	MS
	Chromium	ug/L	50.0	47.1		94.2	80−120	MS
	Cobalt	ug/L	50.0	47.8		95.6	80−120	MS
	Copper	ug/L	50.0	49.6		99.2	80−120	MS
	Iron	ug/L	2000	1900		95.1	80−120	MS
	Lead	ug/L	50.0	53.2		106	80−120	MS
	Magnesium	ug/L	2000	2070		104	80−120	MS
	Manganese	ug/L	50.0	47.8		95.5	80−120	MS
	Molybdenum	ug/L	50.0	50.8		102	80−120	MS
	Potassium	ug/L	2000	2090		104	80−120	MS
	Selenium	ug/L	50.0	49.0		98	80−120	MS
	Silver	ug/L	50.0	51.3		103	80−120	MS
	Sodium	ug/L	2000	2140		107	80−120	MS
	Thallium	ug/L	50.0	51.8		104	80−120	MS
	Thorium	ug/L	50.0	52.4		105	80−120	MS
	Uranium−235	ug/L	0.360	0.370		103	80−120	MS
	Uranium−238	ug/L	49.6	52.4		106	80−120	MS
	Vanadium	ug/L	50.0	48.1		96.3	80−120	MS
	Zinc	ug/L	50.0	50.8		102	80−120	MS
	Nickel	ug/L	50.0	48.4		96.8	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 541201 **Client ID** MW−S30−04132021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541201019 **Serial Dilution ID:** 1204799703

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1.27	J	5	U	44.208			MS
Arsenic	2	U	10	U				MS
Barium	16.8		15.7	J	6.956			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	21500		20700		3.49		20	MS
Chromium	3	U	15	U				MS
Cobalt	.3	U	1.5	U				MS
Copper	.3	U	1.5	U				MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	5210		4890		6.187		20	MS
Manganese	1.43	J	5	U	16.317			MS
Molybdenum	.2	U	1	U				MS
Nickel	.778	J	3	U	3.47			MS
Potassium	3090		2900		6.175			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	21500		20100		6.32		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.107	J	.335	U	57.649			MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	18.1	J				MS

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541201 **Client ID** MW−S30−04132021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541201019 **Serial Dilution ID:** 1204799703

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 541201 **Client ID** MW-S30-04132021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541201020 **Serial Dilution ID:** 1204799708

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	26.3	J	96.5	U	6.809			MS
Antimony	1.36	J	5	U	50.478			MS
Arsenic	2	U	10	U				MS
Barium	17.8		18.3	J	2.481			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	20900		19800		5.039		20	MS
Chromium	3	U	15	U				MS
Cobalt	.3	U	1.5	U				MS
Copper	.445	J	1.5	U	5.618			MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	5360		5060		5.506		20	MS
Manganese	1.07	J	5	U	3.558			MS
Molybdenum	.235	J	1	U	182.979			MS
Nickel	.81	J	3	U	8.025			MS
Potassium	3300		3060		7.291			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	23000		21000		9.07		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium-235	.01	U	.05	U				MS
Uranium-238	.067	U	.335	U				MS
Vanadium	3.3	U	16.5	U				MS
Zinc	5.32	J	16.5	U	90.436			MS

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 541201 **Client ID** MW−S30−04132021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541201020 **Serial Dilution ID:** 1204799708

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 541201 **Method Type**: MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2117232							
1204799699	MB for batch 2117232	MB	G	23−APR−21	50mL	50mL	
1204799700	LCS for batch 2117232	LCS	G	23−APR−21	50mL	50mL	
1204799701	MW−S30−04132021S	MS	G	23−APR−21	50mL	50mL	
1204799702	MW−S30−04132021SD	MSD	G	23−APR−21	50mL	50mL	
541201001	MW−SD26−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201002	MW−SD26−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201003	PT−09−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201004	PT−09−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201005	BEW−4−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201006	BEW−4−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201007	HA20−CMT−4D1−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201008	HA20−CMT−4D1−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201009	MW−BM03−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201010	MW−BM03−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201011	MW−BS10−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201012	MW−BS10−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201013	MW−T10−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201014	MW−T10−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201015	EQ Blank1−04132021	SAMPLE	G	23−APR−21	50mL	50mL	

SW846

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 541201 **Method Type**: MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
541201016	EQ Blank1−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201017	MW−BS13−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201018	MW−BS13−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541201019	MW−S30−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
Batch Number 2117234							
1204799704	MB for batch 2117234	MB	G	23−APR−21	50mL	50mL	
1204799705	LCS for batch 2117234	LCS	G	23−APR−21	50mL	50mL	
1204799706	MW−S30−04132021S	MS	G	23−APR−21	50mL	50mL	
1204799707	MW−S30−04132021SD	MSD	G	23−APR−21	50mL	50mL	
541201020	MW−S30−04132021	SAMPLE	G	23−APR−21	50mL	50mL	

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541201

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 13-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210513-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	20:09:26																							X	X		
S10	1	20:11:13																							X	X		
S100	1	20:13:00																							X	X		
ICV01	1	20:14:46																							X	X		
ICB01	1	20:16:35																							X	X		
CRDL01	1	20:18:23																							X	X		
ICSA01	1	20:20:11																							X	X		
ICSAB01	1	20:21:59																							X	X		
CCV01	1	20:23:46																							X	X		
CCB01	1	20:25:34																							X	X		
1204799704	1	20:27:22																							X	X		
1204799705	1	20:29:09																							X	X		
541201020	1	20:30:56																							X	X		
1204799706	1	20:32:42																							X	X		
1204799707	1	20:34:29																							X	X		
ZZZZZZ	1	20:36:15																										
1204799708	5	20:38:02																							X	X		
ZZZZZZ	1	20:39:48																										
ZZZZZZ	1	20:41:35																										
CCV02	1	20:43:22																							X	X		
CCB02	1	20:45:10																							X	X		
ZZZZZZ	1	20:46:58																										
ZZZZZZ	1	20:48:45																										
ZZZZZZ	1	20:50:31																										
ZZZZZZ	1	20:52:18																										
ZZZZZZ	1	20:54:05																										
ZZZZZZ	1	20:55:51																										
ZZZZZZ	1	20:57:38																										
ZZZZZZ	1	20:59:24																										
CCV	1	21:01:12																							X	X		
CCB	1	21:03:00																							X	X		
ZZZZZZ	1	21:04:47																										
ZZZZZZ	1	21:06:34																										
ZZZZZZ	1	21:08:20																										
ZZZZZZ	1	21:10:06																										
ZZZZZZ	1	21:11:53																										
ZZZZZZ	1	21:13:39																										
ZZZZZZ	1	21:15:25																										
ZZZZZZ	1	21:17:12																										
CCV	1	21:18:59																							X	X		
CCB	1	21:20:47																							X	X		

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541201

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 13-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210513-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	21:22:35																										
ZZZZZZ	1	21:24:21																										
ZZZZZZ	1	21:26:08																										
ZZZZZZ	1	21:27:54																										
ZZZZZZ	1	21:29:41																										
ZZZZZZ	1	21:31:27																										
ZZZZZZ	5	21:33:14																										
ZZZZZZ	1	21:35:00																										
ZZZZZZ	1	21:36:47																										
CCV	1	21:38:34																							X	X		
CCB	1	21:40:22																							X	X		
ZZZZZZ	1	21:42:10																										
ZZZZZZ	1	21:43:56																										
ZZZZZZ	1	21:45:43																										
ZZZZZZ	1	21:47:29																										
ZZZZZZ	1	21:49:15																										
ZZZZZZ	1	21:51:02																										
ZZZZZZ	1	21:52:48																										
ZZZZZZ	1	21:54:35																										
CCV	1	21:56:22																							X	X		
CCB	1	21:58:10																							X	X		
ZZZZZZ	1	21:59:58																										
ZZZZZZ	1	22:01:45																										
ZZZZZZ	1	22:03:31																										
ZZZZZZ	1	22:05:19																										
ZZZZZZ	1	22:07:05																										
ZZZZZZ	1	22:08:52																										
ZZZZZZ	1	22:10:39																										
ZZZZZZ	1	22:12:26																										
ZZZZZZ	1	22:14:12																										
CCV03	1	22:16:00																							X	X		
CCB03	1	22:17:48																							X	X		
1204799699	1	22:19:35																							X	X		
1204799700	1	22:21:22																							X	X		
541201001	1	22:23:08																							X	X		
541201002	1	22:24:55																							X	X		
541201003	1	22:26:41																							X	X		
541201004	1	22:28:28																							X	X		
541201005	1	22:30:14																							X	X		
541201006	1	22:32:01																							X	X		
CCV04	1	22:33:48																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541201

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 13-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210513-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB04	1	22:35:36																							X	X		
541201007	1	22:37:23																							X	X		
541201008	1	22:39:10																							X	X		
541201009	1	22:40:56																							X	X		
541201010	1	22:42:43																							X	X		
541201011	1	22:44:29																							X	X		
541201012	1	22:46:16																							X	X		
541201013	1	22:48:03																							X	X		
541201014	1	22:49:49																							X	X		
541201015	1	22:51:36																							X	X		
CCV05	1	22:53:22																							X	X		
CCB05	1	22:55:10																							X	X		
541201016	1	22:56:58																							X	X		
541201017	1	22:58:44																							X	X		
541201018	1	23:00:31																							X	X		
541201019	1	23:02:17																							X	X		
1204799701	1	23:04:04																							X	X		
1204799702	1	23:05:50																							X	X		
ZZZZZZ	1	23:07:37																										
1204799703	5	23:09:23																							X	X		
CCV06	1	23:11:11																							X	X		
CCB06	1	23:12:59																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5 Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL | **Client Sdg:** 541201

Inst Name: ICPMS15 | **Instrument Type:** MS

Start Date: 13-MAY-21 | **End Date:** 14-MAY-21 | **Data File:** 210513-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	05:53:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	05:57:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	06:01:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	06:04:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	06:08:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	06:11:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	06:15:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	06:19:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	06:22:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	06:26:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	06:30:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	06:33:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	06:37:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799699	1	06:40:57	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799700	1	06:44:34	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201001	1	06:48:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201002	1	06:51:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201003	1	06:55:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201004	1	06:59:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201005	1	07:02:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201006	1	07:06:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV03	1	07:09:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	07:13:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201007	1	07:17:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201008	1	07:21:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201009	1	07:24:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201010	1	07:28:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201011	1	07:32:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201012	1	07:35:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201013	1	07:39:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201014	1	07:43:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201015	1	07:46:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	07:50:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	07:53:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201016	1	07:57:29	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201017	1	08:01:06	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	10	08:04:43																										
541201018	1	08:08:21	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	10	08:11:59																										
541201019	1	08:15:37	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799701	1	08:19:14	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541201

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 13-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210513-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
1204799702	1	08:22:50	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	08:26:27																										
1204799703	5	08:30:04	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV05	1	08:33:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	08:37:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541201

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 14-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210514-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	10:06:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	10:09:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	10:12:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	10:16:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	10:19:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	10:22:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	10:26:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	10:29:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	10:32:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	10:36:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	10:39:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	10:42:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	10:46:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799699	1	10:49:30							X																			
1204799700	1	10:52:48							X																			
541201016	1	10:56:07							X																			
541201017	10	10:59:27							X																			
541201018	10	11:02:47							X																			
541201019	1	11:06:06							X																			
1204799701	1	11:09:24							X																			
1204799702	1	11:12:43							X																			
ZZZZZZ	1	11:16:01																										
1204799703	5	11:19:19							X																			
CCV03	1	11:22:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	11:25:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	11:29:22																										
ZZZZZZ	1	11:32:41																										
ZZZZZZ	1	11:36:00																										
ZZZZZZ	1	11:39:18																										
ZZZZZZ	1	11:42:36																										
ZZZZZZ	1	11:45:54																										
ZZZZZZ	5	11:49:13																										
ZZZZZZ	1	11:52:31																										
ZZZZZZ	1	11:55:49																										
CCV	1	11:59:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	12:02:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	12:05:48																										
ZZZZZZ	1	12:09:07																										
ZZZZZZ	1	12:12:25																										
ZZZZZZ	1	12:15:43																										
ZZZZZZ	10	12:19:03																										

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541201

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 14-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210514-4

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	12:22:23																										
ZZZZZZ	1	12:25:41																										
ZZZZZZ	1	12:28:59																										
ZZZZZZ	1	12:32:17																										
ZZZZZZ	1	12:35:35																										
CCV	1	12:38:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	12:42:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	12:45:36																										
ZZZZZZ	1	12:48:54																										
ZZZZZZ	1	12:52:13																										
ZZZZZZ	1	12:55:32																										
ZZZZZZ	1	12:58:50																										
ZZZZZZ	10	13:02:16																										
ZZZZZZ	1	13:05:35																										
ZZZZZZ	1	13:08:54																										
ZZZZZZ	1	13:12:13																										
CCV	1	13:15:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	13:18:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	10	13:22:51																										
ZZZZZZ	10	13:26:10																										
CCV04	1	13:29:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	13:32:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799704	1	13:36:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799705	1	13:39:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541201020	1	13:42:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799706	1	13:46:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799707	1	13:49:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	13:52:46																										
1204799708	5	13:56:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	13:59:25																										
ZZZZZZ	1	14:02:44																										
CCV05	1	14:06:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	14:09:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 541201

Contract: DMAX00801 **Lab Code:** **GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 541201

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117232**
Analyst: Ridge Gleaton
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799700	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799700	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799701	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799701	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799702	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799702	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204799699 MB	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799700 LCS	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201001	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201002	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201003	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201004	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201005	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201006	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201007	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201008	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201009	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201010	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201011	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201012	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201013	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201014	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201015	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201016	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201017	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201018	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201019	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799703 SDILT (541201019)	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799701 MS (541201019)	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799702 MSD (541201019)	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3265774	HYDROCHLORIC ACID	2.5 mL
3267483	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 93 C
Temperature within limits (Y/N)?: y
Thermometer ID: 14302
Hot Block ID: 14
Digestion tube lot #: 2018043

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: 2117234
Analyst: Ridge Gleaton
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799705	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799705	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799706	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799706	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799707	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799707	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	**Prep Date**	**Matrix**	**Initial Volume (mL)**	**Hot Block Stop Date (date)**	**Final Volume (mL)**	**Prep Factor (mL/mL)**	**pH Check**
1204799704 MB	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799705 LCS	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201020	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799708 SDILT (541201020)	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799706 MS (541201020)	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799707 MSD (541201020)	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202001	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202002	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202003	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202004	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202005	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202006	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202007	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202008	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202009	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202010	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202011	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202012	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202013	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202014	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202015	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202016	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202017	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202018	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2

Reagent/Solvent Lot ID	**Description**	**Amount**
3265774	HYDROCHLORIC ACID	2.5 mL
3267483	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 93 C
Temperature within limits (Y/N)?: y
Thermometer ID: 14302
Hot Block ID: 14
Digestion tube lot #: 2018043

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 13, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541202

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 17, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Chain of Custody: 04132021
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541202

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541202

May 13, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 17, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541202001	HA20-CMT-5S-04132021
541202002	HA20-CMT-5S-04132021
541202003	HA-09-04132021
541202004	HA-09-04132021
541202005	MW-S06-04132021
541202006	MW-S06-04132021
541202007	MW-S06-04132021DUP
541202008	MW-S06-04132021DUP
541202009	HA20-CMT-5I-04132021
541202010	HA20-CMT-5I-04132021
541202011	GZW-8-1-04132021
541202012	GZW-8-1-04132021
541202013	P1-A-04132021
541202014	P1-A-04132021
541202015	MW-BS03-04132021
541202016	MW-BS03-04132021
541202017	MW-SD13-04132021
541202018	MW-SD13-04132021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page: 2 of 2
Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]: 04132021
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541202

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) NI	Dissolved Metals (6020A ICP-MS) NI	U-235/U-238 plus Total U Calc. NI	Comments: Note: extra sample is required for sample specific QC (<-- Preservative Type (6))
HA20-CMT-5S-04132021	4/13/2021	13:05	N	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
HA-09-04132021	4/13/2021	14:55	N	Y	GW	U238		2	X	X	X	
MW-S06-04132021	4/13/2021	14:55	N	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
MW-S06-04132021DUP	4/13/2021	15:00	FD	Y	GW	U238		2	X	X	X	
HA20-CMT-5I-04132021	4/13/2021	15:10	N	Y	GW	U238		2	X	X	X	
GZW-8-1-04132021	4/13/2021	11:50	N	Y	GW	U238		2	X	X	X	
P1-A-04132021	4/13/2021	13:05	N	Y	GW	U238		2	X	X	X	
MW-BS03-04132021	4/13/2021	15:55	N	Y	GW	U238		2	X	X	X	U-235/U-238 plus Total U Calc. for Total and Dissolved
MW-SD13-04132021	4/13/2021	16:00	N	Y	GW	U238		2	X	X	X	

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/16/2021	0800	1	[signature]	4/16/21	0800
2	[signature]	4/16/21	1530	2	[signature]	4172192	
3				3			

TAT Requested: Normal: X Rush: ____ Specify: ____
Fax Results: [ ] Yes [X] No
Select Deliverable: [X] C of A [X] QC Summary [X] Level 5
Additional Remarks:
For Lab Receiving Use Only: Custody Seal Intact? [ ] *Yes* [ ] *No* **Cooler Temp:** ____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)
Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank
7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No radioactive material detected via Nat. [illegible]

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541202
Received By: Stacy Boone	Date Received: April 17, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 6884 6500 3°c 7734 6884 6451 4°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?	✓		COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?	✓		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:_____
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?			✓	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) SEE ATTACHED
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7734 6884 6716 3°c   7734 6884 5948 2°c

7734 6884 6201 3°c   7734 6884 6407 4°c

PM (or PMA) review: Initials MB Date 4/19/21 Page 1 of 2

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC SAMPLE RECEIPT & REVIEW CONTINUATION FORM

Client: DMAX Received By: SB Date Received: 4/17/21 SDG/AR/COC/Work Order: 541202

ID:	COC TIME:	SAMPLE TIME:
HB-10-04142021	14:30	16:05
HBPZ-2R-04142021	14:05	14:30
HA20-CMT-61-04142021	14:00	14:05
~~GW~~		
GZW-11-2-04152021	13:05	16:05

PM (or PMA) review: Initials MB Date 4/19/21 Page 2 of 2

Work Order Containers

Sample ID: **541202001**
Client Sample ID: **HA20−CMT−5S−04132021**
Description: **Ground Water**

Label: 541202001.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202002**
Client Sample ID: **HA20−CMT−5S−04132021**
Description: **Dissolved Ground Water**

Label: 541202002.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202003**
Client Sample ID: **HA−09−04132021**
Description: **Ground Water**

Label: 541202003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541202004**
Client Sample ID: **HA−09−04132021**
Description: **Dissolved Ground Water**

Label: 541202004.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202005**
Client Sample ID: **MW−S06−04132021**
Description: **Ground Water**

Label: 541202005.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202006**
Client Sample ID: **MW−S06−04132021**
Description: **Dissolved Ground Water**

Label: 541202006.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541202007**
Client Sample ID: **MW−S06−04132021DUP**
Description: **Ground Water**

Label: 541202007.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202008**
Client Sample ID: **MW−S06−04132021DUP**
Description: **Dissolved Ground Water**

Label: 541202008.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202009**
Client Sample ID: **HA20−CMT−5I−04132021**
Description: **Ground Water**

Label: 541202009.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541202010**
Client Sample ID: **HA20−CMT−5I−04132021**
Description: **Dissolved Ground Water**

Label: 541202010.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202011**
Client Sample ID: **GZW−8−1−04132021**
Description: **Ground Water**

Label: 541202011.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202012**
Client Sample ID: **GZW−8−1−04132021**
Description: **Dissolved Ground Water**

Label: 541202012.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541202013**
Client Sample ID: **P1−A−04132021**
Description: **Ground Water**

Label: 541202013.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202014**
Client Sample ID: **P1−A−04132021**
Description: **Dissolved Ground Water**

Label: 541202014.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202015**
Client Sample ID: **MW−BS03−04132021**
Description: **Ground Water**

Label: 541202015.01	Type: Plastic 500 ml	Preservative: Nitric pH<2
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541202016**
Client Sample ID: **MW−BS03−04132021**
Description: **Dissolved Ground Water**

Label: 541202016.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202017**
Client Sample ID: **MW−SD13−04132021**
Description: **Ground Water**

Label: 541202017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Sample ID: **541202018**
Client Sample ID: **MW−SD13−04132021**
Description: **Dissolved Ground Water**

Label: 541202018.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:36:38	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
22−APR−21 18:41:35	Ridge Gleaton	Transfered custody to batch 2117234
22−APR−21 18:41:35	Ridge Gleaton	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
22−APR−21 23:20:17	Ridge Gleaton	Changed batch_id from 2117234 to
22−APR−21 23:20:17	Ridge Gleaton	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
23−APR−21 08:21:37	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 13 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541202

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 34
Analytical Batch: 2117235

Product: **Inorganic Calculations**
Analytical Method: SW846 6020
Analytical Procedure: GL-GC-E-107 REV# 10
Analytical Batch: 2128155

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2117234

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541202001	HA20-CMT-5S-04132021
541202002	HA20-CMT-5S-04132021
541202003	HA-09-04132021
541202004	HA-09-04132021
541202005	MW-S06-04132021
541202006	MW-S06-04132021
541202007	MW-S06-04132021DUP
541202008	MW-S06-04132021DUP
541202009	HA20-CMT-5I-04132021
541202010	HA20-CMT-5I-04132021
541202011	GZW-8-1-04132021
541202012	GZW-8-1-04132021
541202013	P1-A-04132021
541202014	P1-A-04132021
541202015	MW-BS03-04132021
541202016	MW-BS03-04132021
541202017	MW-SD13-04132021
541202018	MW-SD13-04132021
1204799704	Method Blank (MB)**ICP-MS**
1204799705	Laboratory Control Sample (LCS)
1204799708	541201020(MW-S30-04132021L) Serial Dilution (SD)
1204799706	541201020(MW-S30-04132021S) Matrix Spike (MS)
1204799707	541201020(MW-S30-04132021SD) Matrix Spike Duplicate (MSD)

Samples 541202001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017 and 018 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements

The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. ICP-MS.

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541202001 (HA20-CMT-5S-04132021), 541202002 (HA20-CMT-5S-04132021), 541202015 (MW-BS03-04132021) and 541202016 (MW-BS03-04132021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541202			
	001	**002**	**015**	**016**
Calcium	1X	1X	10X	10X
Iron	10X	10X	1X	1X
Uranium-235	1X	1X	2X	2X
Uranium-238	1X	1X	2X	2X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541202 GEL Work Order: 541202

The Qualifiers in this report are defined as follows:

*   Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

**   Indicates analyte is a surrogate compound.

J   Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

U   Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Edmund Frampton**

Date: 14 MAY 2021 **Title: Team Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202001 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: HA20−CMT−5S−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	213	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−38−2	Arsenic	7.14	ug/L		2.00	5.00	5.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−39−3	Barium	12.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−70−2	Calcium	5340	ug/L		80.0	200	200	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−48−4	Cobalt	6.86	ug/L		0.300	1.00	1.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−50−8	Copper	1.91	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7439−89−6	Iron	12100	ug/L		330	1000	1000	10	MS	PRB	05/14/21 15:26	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7439−95−4	Magnesium	1170	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7439−96−5	Manganese	949	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7439−98−7	Molybdenum	1.95	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−02−0	Nickel	4.73	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−09−7	Potassium	2040	ug/L		80.0	300	300	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−23−5	Sodium	6460	ug/L		80.0	250	250	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−61−1	Total Uranium	0.725	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:39	210513−1	2117235
7440−61−1	Uranium−238	0.725	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:39	210513−1	2117235
7440−62−2	Vanadium	3.73	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 13:59	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 13:59	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202002 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: HA20−CMT−5S−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	52.8	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−38−2	Arsenic	6.64	ug/L		2.00	5.00	5.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−39−3	Barium	11.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−70−2	Calcium	5090	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−48−4	Cobalt	6.38	ug/L		0.300	1.00	1.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−50−8	Copper	0.370	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7439−89−6	Iron	11200	ug/L		330	1000	1000	10	MS	PRB	05/14/21 15:29	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7439−95−4	Magnesium	1070	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7439−96−5	Manganese	901	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7439−98−7	Molybdenum	1.78	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−02−0	Nickel	4.34	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−09−7	Potassium	1890	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−23−5	Sodium	6090	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−61−1	Total Uranium	0.491	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:41	210513−1	2117235
7440−61−1	Uranium−238	0.491	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:41	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:02	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:02	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202003 **BASIS:** As Received **DATE COLLECTED** 13-APR-21

CLIENT ID: HA-09-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1560	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-39-3	Barium	18.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-70-2	Calcium	5250	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-47-3	Chromium	5.16	ug/L	J	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-48-4	Cobalt	1.49	ug/L		0.300	1.00	1.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-50-8	Copper	2.43	ug/L		0.300	2.00	2.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7439-89-6	Iron	1900	ug/L		33.0	100	100	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7439-92-1	Lead	1.02	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7439-95-4	Magnesium	1430	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7439-96-5	Manganese	32.8	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-02-0	Nickel	2.36	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-09-7	Potassium	1410	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-23-5	Sodium	5090	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-29-1	Thorium	0.717	ug/L	J	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-61-1	Total Uranium	0.336	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:46	210513-1	2117235
7440-61-1	Uranium-238	0.336	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:46	210513-1	2117235
7440-62-2	Vanadium	4.95	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:12	210514-3	2117235
7440-66-6	Zinc	6.30	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:12	210514-3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202004 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: HA−09−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−39−3	Barium	2.65	ug/L	J	0.670	4.00	4.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−70−2	Calcium	4820	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−50−8	Copper	0.334	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7439−95−4	Magnesium	775	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−09−7	Potassium	813	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−23−5	Sodium	5220	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:48	210513−1	2117235
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:48	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:16	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:16	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202005 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−S06−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	132	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−36−0	Antimony	1.32	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−39−3	Barium	17.7	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−70−2	Calcium	18500	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−48−4	Cobalt	0.320	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−50−8	Copper	1.04	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7439−89−6	Iron	194	ug/L		33.0	100	100	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7439−92−1	Lead	1.42	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7439−95−4	Magnesium	4780	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7439−96−5	Manganese	17.1	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−02−0	Nickel	0.924	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−09−7	Potassium	3260	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−23−5	Sodium	20900	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−61−1	Total Uranium	0.590	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:50	210513−1	2117235
7440−61−1	Uranium−238	0.590	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:50	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:19	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:19	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202006 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−S06−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	38.6	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−36−0	Antimony	1.23	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−39−3	Barium	17.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−70−2	Calcium	18700	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−50−8	Copper	0.499	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7439−89−6	Iron	61.7	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7439−95−4	Magnesium	4750	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7439−96−5	Manganese	15.0	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−02−0	Nickel	0.810	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−09−7	Potassium	3240	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−23−5	Sodium	21300	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−61−1	Total Uranium	0.234	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:52	210513−1	2117235
7440−61−1	Uranium−238	0.234	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:52	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:22	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:22	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202007 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−S06−04132021DUP **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	183	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−36−0	Antimony	1.38	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−39−3	Barium	18.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−70−2	Calcium	18700	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−48−4	Cobalt	0.338	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−50−8	Copper	1.13	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7439−89−6	Iron	261	ug/L		33.0	100	100	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7439−92−1	Lead	1.49	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7439−95−4	Magnesium	4800	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7439−96−5	Manganese	17.3	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−02−0	Nickel	0.971	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−09−7	Potassium	3290	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−23−5	Sodium	20800	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−61−1	Total Uranium	0.600	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:54	210513−1	2117235
7440−61−1	Uranium−238	0.600	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:54	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:25	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:25	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202008 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−S06−04132021DUP **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	52.6	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−36−0	Antimony	1.22	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−39−3	Barium	16.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−70−2	Calcium	18700	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−50−8	Copper	0.591	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7439−89−6	Iron	80.3	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7439−95−4	Magnesium	4720	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7439−96−5	Manganese	16.3	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−02−0	Nickel	0.964	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−09−7	Potassium	3230	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−23−5	Sodium	20900	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−61−1	Total Uranium	0.221	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:55	210513−1	2117235
7440−61−1	Uranium−238	0.221	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:55	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:29	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:29	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202009 **BASIS:** As Received **DATE COLLECTED** 13-APR-21

CLIENT ID: HA20-CMT-5I-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-39-3	Barium	24.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-70-2	Calcium	24000	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7439-95-4	Magnesium	6120	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7439-96-5	Manganese	2.53	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-02-0	Nickel	0.777	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-09-7	Potassium	3240	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-23-5	Sodium	29300	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-61-1	Total Uranium	0.838	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:57	210513-1	2117235
7440-61-1	Uranium-238	0.838	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:57	210513-1	2117235
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:32	210514-3	2117235
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:32	210514-3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202010 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: HA20−CMT−5I−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−39−3	Barium	23.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−70−2	Calcium	23300	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−50−8	Copper	0.408	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7439−89−6	Iron	37.2	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7439−95−4	Magnesium	5940	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7439−96−5	Manganese	2.74	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7439−98−7	Molybdenum	0.205	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−02−0	Nickel	1.06	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−09−7	Potassium	3130	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−23−5	Sodium	28700	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−61−1	Total Uranium	0.447	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 20:59	210513−1	2117235
7440−61−1	Uranium−238	0.447	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 20:59	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:35	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:35	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202011 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: GZW−8−1−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−39−3	Barium	11.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−70−2	Calcium	19100	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7439−95−4	Magnesium	5180	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7439−96−5	Manganese	4.37	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7439−98−7	Molybdenum	0.939	ug/L	J	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−02−0	Nickel	0.977	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−09−7	Potassium	2450	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−23−5	Sodium	24500	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 21:04	210513−1	2117235
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 21:04	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:39	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:39	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202012 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: GZW−8−1−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−39−3	Barium	11.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−70−2	Calcium	19700	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7439−95−4	Magnesium	5270	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7439−98−7	Molybdenum	1.04	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−02−0	Nickel	0.850	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−09−7	Potassium	2520	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−23−5	Sodium	25000	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 21:06	210513−1	2117235
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 21:06	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:49	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:49	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202013 **BASIS:** As Received **DATE COLLECTED** 13−APR−21

CLIENT ID: P1−A−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−39−3	Barium	16.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−70−2	Calcium	23100	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−50−8	Copper	0.549	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7439−89−6	Iron	45.0	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7439−92−1	Lead	17.8	ug/L		0.500	2.00	2.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7439−95−4	Magnesium	5220	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7439−96−5	Manganese	8.92	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−02−0	Nickel	0.739	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−09−7	Potassium	3050	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−23−5	Sodium	24700	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 21:08	210513−1	2117235
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 21:08	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:52	210514−3	2117235
7440−66−6	Zinc	30.1	ug/L		3.30	20.0	20.0	1	MS	PRB	05/14/21 14:52	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202014 **BASIS:** Filtered **DATE COLLECTED** 13-APR-21

CLIENT ID: P1-A-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-39-3	Barium	16.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-70-2	Calcium	23800	ug/L		80.0	200	200	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-50-8	Copper	0.552	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7439-92-1	Lead	4.18	ug/L		0.500	2.00	2.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7439-95-4	Magnesium	5450	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7439-96-5	Manganese	2.51	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-02-0	Nickel	0.878	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-09-7	Potassium	3170	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-23-5	Sodium	26300	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 21:10	210513-1	2117235
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 21:10	210513-1	2117235
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:55	210514-3	2117235
7440-66-6	Zinc	41.5	ug/L		3.30	20.0	20.0	1	MS	PRB	05/14/21 14:55	210514-3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202015 **BASIS:** As Received **DATE COLLECTED** 13-APR-21

CLIENT ID: MW-BS03-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-36-0	Antimony	1.72	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-38-2	Arsenic	123	ug/L		2.00	5.00	5.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-39-3	Barium	68.4	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-70-2	Calcium	55900	ug/L		800	2000	2000	10	MS	PRB	05/14/21 15:02	210514-3	2117235
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-48-4	Cobalt	3.62	ug/L		0.300	1.00	1.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7439-89-6	Iron	2540	ug/L		33.0	100	100	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7439-95-4	Magnesium	20700	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7439-96-5	Manganese	492	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7439-98-7	Molybdenum	6.41	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-02-0	Nickel	7.03	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-09-7	Potassium	6690	ug/L		80.0	300	300	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-23-5	Sodium	42600	ug/L		80.0	250	250	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-61-1	Total Uranium	117	ug/L		0.134	0.400	0.400			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.869	ug/L		0.0200	0.140	0.140	2	MS	PRB	05/14/21 09:38	210514-2	2117235
7440-61-1	Uranium-238	116	ug/L		0.134	0.400	0.400	2	MS	PRB	05/14/21 09:38	210514-2	2117235
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:59	210514-3	2117235
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 14:59	210514-3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202016 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−BS03−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−36−0	Antimony	1.62	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−38−2	Arsenic	123	ug/L		2.00	5.00	5.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−39−3	Barium	70.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−70−2	Calcium	54100	ug/L		800	2000	2000	10	MS	PRB	05/14/21 15:09	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−48−4	Cobalt	3.47	ug/L		0.300	1.00	1.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−50−8	Copper	0.474	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7439−89−6	Iron	2340	ug/L		33.0	100	100	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7439−95−4	Magnesium	21100	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7439−96−5	Manganese	500	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7439−98−7	Molybdenum	6.64	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−02−0	Nickel	6.36	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−09−7	Potassium	6930	ug/L		80.0	300	300	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−23−5	Sodium	42300	ug/L		80.0	250	250	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−61−1	Total Uranium	126	ug/L		0.134	0.400	0.400			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.924	ug/L		0.0200	0.140	0.140	2	MS	PRB	05/14/21 09:39	210514−2	2117235
7440−61−1	Uranium−238	125	ug/L		0.134	0.400	0.400	2	MS	PRB	05/14/21 09:39	210514−2	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 15:05	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 15:05	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202017 **BASIS:** As Received **DATE COLLECTED** 13-APR-21

CLIENT ID: MW-SD13-04132021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	481	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-39-3	Barium	7.88	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-70-2	Calcium	13400	ug/L		80.0	200	200	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-48-4	Cobalt	1.06	ug/L		0.300	1.00	1.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-50-8	Copper	2.06	ug/L		0.300	2.00	2.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7439-89-6	Iron	533	ug/L		33.0	100	100	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7439-95-4	Magnesium	1800	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7439-96-5	Manganese	10.4	ug/L		1.00	5.00	5.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7439-98-7	Molybdenum	3.66	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-02-0	Nickel	3.33	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-09-7	Potassium	2020	ug/L		80.0	300	300	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-23-5	Sodium	13600	ug/L		80.0	250	250	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-61-1	Total Uranium	0.147	ug/L	J	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 21:15	210513-1	2117235
7440-61-1	Uranium-238	0.147	ug/L	J	0.0670	0.200	0.200	1	MS	PRB	05/13/21 21:15	210513-1	2117235
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 15:12	210514-3	2117235
7440-66-6	Zinc	4.48	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/14/21 15:12	210514-3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541202 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541202018 **BASIS:** Filtered **DATE COLLECTED** 13−APR−21

CLIENT ID: MW−SD13−04132021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	55.6	ug/L		19.3	50.0	50.0	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−39−3	Barium	5.02	ug/L		0.670	4.00	4.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−70−2	Calcium	13000	ug/L		80.0	200	200	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−48−4	Cobalt	0.802	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−50−8	Copper	3.52	ug/L		0.300	2.00	2.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7439−89−6	Iron	66.8	ug/L	J	33.0	100	100	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7439−95−4	Magnesium	1640	ug/L		10.0	30.0	30.0	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7439−96−5	Manganese	2.20	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7439−98−7	Molybdenum	3.59	ug/L		0.200	1.00	1.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−02−0	Nickel	2.88	ug/L		0.600	2.00	2.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−09−7	Potassium	1800	ug/L		80.0	300	300	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−23−5	Sodium	13600	ug/L		80.0	250	250	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 15:57		2128155
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 21:17	210513−1	2117235
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 21:17	210513−1	2117235
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 15:15	210514−3	2117235
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/14/21 15:15	210514−3	2117235

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2117235	2117234	SW846 3005A	50	mL	50	mL	04/23/21	RG1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	101.2	90.0 − 110.0	MS	13−MAY−21 20:14	210513−1
	Uranium−238	51.8	ug/L	49.64	ug/L	104.3	90.0 − 110.0	MS	13−MAY−21 20:14	210513−1
	Uranium−235	0.37	ug/L	0.36	ug/L	101.6	90.0 − 110.0	MS	14−MAY−21 09:21	210514−2
	Uranium−238	49.1	ug/L	49.64	ug/L	98.8	90.0 − 110.0	MS	14−MAY−21 09:21	210514−2
	Aluminum	5010	ug/L	5050	ug/L	99.2	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Arsenic	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Barium	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Beryllium	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Cadmium	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Calcium	5050	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Chromium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Cobalt	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Copper	52.4	ug/L	50	ug/L	104.7	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Iron	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Lead	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Magnesium	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Manganese	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Molybdenum	48.2	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Nickel	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Potassium	5240	ug/L	5000	ug/L	104.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Selenium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Silver	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Sodium	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Thallium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Thorium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Vanadium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
	Zinc	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:16	210514−3
CCV01										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.2	90.0 − 110.0	MS	13−MAY−21 20:23	210513−1
	Uranium−238	52.5	ug/L	49.64	ug/L	105.8	90.0 − 110.0	MS	13−MAY−21 20:23	210513−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Uranium−235	0.36	ug/L	0.36	ug/L	98.6	90.0 − 110.0	MS	14−MAY−21 09:30	210514−2
	Uranium−238	47.8	ug/L	49.64	ug/L	96.2	90.0 − 110.0	MS	14−MAY−21 09:30	210514−2
	Aluminum	5020	ug/L	5050	ug/L	99.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Antimony	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Arsenic	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Barium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Beryllium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Cadmium	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Calcium	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Chromium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Cobalt	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Copper	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Magnesium	5040	ug/L	5000	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Manganese	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Molybdenum	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Nickel	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Selenium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Silver	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Sodium	5110	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Thallium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Thorium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Vanadium	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
	Zinc	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	14−MAY−21 10:32	210514−3
CCV02										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.7	90.0 − 110.0	MS	13−MAY−21 20:43	210513−1
	Uranium−238	51.8	ug/L	49.64	ug/L	104.3	90.0 − 110.0	MS	13−MAY−21 20:43	210513−1
	Uranium−235	0.36	ug/L	0.36	ug/L	98.9	90.0 − 110.0	MS	14−MAY−21 09:41	210514−2
	Uranium−238	48.6	ug/L	49.64	ug/L	98	90.0 − 110.0	MS	14−MAY−21 09:41	210514−2

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Aluminum	5090	ug/L	5050	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Antimony	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Arsenic	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Barium	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Beryllium	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Cadmium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Calcium	5040	ug/L	5000	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Chromium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Cobalt	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Copper	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Lead	52.8	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Magnesium	5110	ug/L	5000	ug/L	102.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Manganese	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Molybdenum	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Nickel	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Potassium	5340	ug/L	5000	ug/L	106.7	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Selenium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Silver	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Sodium	5180	ug/L	5000	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Thallium	52.1	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Thorium	56.4	ug/L	50	ug/L	112.9	90.0 − 110.0 *	MS	14−MAY−21 10:42	210514−3
	Vanadium	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
	Zinc	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	14−MAY−21 10:42	210514−3
CCV03										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.8	90.0 − 110.0	MS	13−MAY−21 21:01	210513−1
	Uranium−238	53.3	ug/L	49.64	ug/L	107.3	90.0 − 110.0	MS	13−MAY−21 21:01	210513−1
	Aluminum	4730	ug/L	5050	ug/L	93.6	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Antimony	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Barium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Beryllium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Cadmium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Calcium	4720	ug/L	5000	ug/L	94.3	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Chromium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Cobalt	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Copper	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Iron	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Lead	52.4	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Magnesium	4860	ug/L	5000	ug/L	97.1	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Manganese	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Molybdenum	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Nickel	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Potassium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Selenium	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Silver	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Sodium	4950	ug/L	5000	ug/L	99	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Thallium	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Thorium	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Vanadium	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
	Zinc	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	14−MAY−21 13:29	210514−3
CCV04										
	Uranium−235	0.36	ug/L	0.36	ug/L	101.1	90.0 − 110.0	MS	13−MAY−21 21:18	210513−1
	Uranium−238	51.4	ug/L	49.64	ug/L	103.5	90.0 − 110.0	MS	13−MAY−21 21:18	210513−1
	Aluminum	4720	ug/L	5050	ug/L	93.4	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Antimony	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Arsenic	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Barium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Beryllium	48.5	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Cadmium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Calcium	4780	ug/L	5000	ug/L	95.6	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Chromium	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cobalt	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Copper	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Iron	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Lead	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Magnesium	4860	ug/L	5000	ug/L	97.3	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Manganese	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Molybdenum	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Nickel	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Potassium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Selenium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Silver	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Sodium	4890	ug/L	5000	ug/L	97.9	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Thallium	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Thorium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Vanadium	47.7	ug/L	50	ug/L	95.4	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
	Zinc	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	14−MAY−21 14:06	210514−3
CCV05										
	Aluminum	4660	ug/L	5050	ug/L	92.2	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Antimony	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Arsenic	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Barium	52.1	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Beryllium	48	ug/L	50	ug/L	95.9	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Cadmium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Calcium	4750	ug/L	5000	ug/L	94.9	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Chromium	47.8	ug/L	50	ug/L	95.6	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Cobalt	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Copper	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Iron	4830	ug/L	5000	ug/L	96.7	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Lead	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Magnesium	4730	ug/L	5000	ug/L	94.6	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Manganese	47.4	ug/L	50	ug/L	94.9	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Molybdenum	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Nickel	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Potassium	4950	ug/L	5000	ug/L	98.9	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Selenium	48.8	ug/L	50	ug/L	97.5	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Silver	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Sodium	4770	ug/L	5000	ug/L	95.5	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Thallium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Thorium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Vanadium	46.8	ug/L	50	ug/L	93.6	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
	Zinc	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	14−MAY−21 14:42	210514−3
CCV06										
	Aluminum	4680	ug/L	5050	ug/L	92.6	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Antimony	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Barium	52.4	ug/L	50	ug/L	104.7	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Beryllium	47.7	ug/L	50	ug/L	95.4	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Cadmium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Calcium	4680	ug/L	5000	ug/L	93.5	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Chromium	48.1	ug/L	50	ug/L	96.2	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Cobalt	48	ug/L	50	ug/L	95.9	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Copper	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Iron	4790	ug/L	5000	ug/L	95.7	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Lead	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Magnesium	4780	ug/L	5000	ug/L	95.6	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Manganese	47.3	ug/L	50	ug/L	94.6	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Molybdenum	48.3	ug/L	50	ug/L	96.6	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Nickel	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Potassium	4890	ug/L	5000	ug/L	97.8	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Selenium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Silver	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Sodium	4750	ug/L	5000	ug/L	95	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Thallium	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Thorium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Vanadium	47.8	ug/L	50	ug/L	95.7	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
	Zinc	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	14−MAY−21 15:18	210514−3
CCV07										
	Aluminum	4730	ug/L	5050	ug/L	93.7	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Antimony	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Arsenic	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Barium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Beryllium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Cadmium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Calcium	4770	ug/L	5000	ug/L	95.5	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Chromium	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Cobalt	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Copper	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Iron	4820	ug/L	5000	ug/L	96.5	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Lead	52.3	ug/L	50	ug/L	104.5	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Magnesium	4840	ug/L	5000	ug/L	96.8	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Manganese	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Molybdenum	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Nickel	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Potassium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Selenium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Silver	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Sodium	4850	ug/L	5000	ug/L	97.1	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Thallium	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Thorium	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Vanadium	48.2	ug/L	50	ug/L	96.3	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3
	Zinc	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	14−MAY−21 15:32	210514−3

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Uranium−235	.0013	ug/L	.0014	ug/L	92.9	80.0 − 120.0	MS	13−MAY−21 20:18	210513−1
	Uranium−238	.217	ug/L	.2	ug/L	108.5	80.0 − 120.0	MS	13−MAY−21 20:18	210513−1
	Uranium−235	.0016	ug/L	.0014	ug/L	114.3	80.0 − 120.0	MS	14−MAY−21 09:25	210514−2
	Uranium−238	.191	ug/L	.2	ug/L	95.3	80.0 − 120.0	MS	14−MAY−21 09:25	210514−2
	Aluminum	52.1	ug/L	50	ug/L	104.2	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Antimony	3.13	ug/L	3	ug/L	104.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Arsenic	4.98	ug/L	5	ug/L	99.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Barium	4.24	ug/L	4	ug/L	105.9	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Beryllium	.501	ug/L	.5	ug/L	100.2	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Cadmium	.974	ug/L	1	ug/L	97.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Calcium	256	ug/L	200	ug/L	128	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Chromium	10.2	ug/L	10	ug/L	102.2	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Cobalt	1.04	ug/L	1	ug/L	103.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Copper	2.19	ug/L	2	ug/L	109.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Iron	103	ug/L	100	ug/L	103.3	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Lead	2.15	ug/L	2	ug/L	107.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Magnesium	32.4	ug/L	30	ug/L	107.9	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Manganese	5.12	ug/L	5	ug/L	102.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Molybdenum	1.05	ug/L	1	ug/L	104.8	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Nickel	2.12	ug/L	2	ug/L	106.1	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Potassium	322	ug/L	300	ug/L	107.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Selenium	5.14	ug/L	5	ug/L	102.8	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Silver	1.03	ug/L	1	ug/L	102.8	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Sodium	258	ug/L	250	ug/L	103.4	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Thallium	2.07	ug/L	2	ug/L	103.6	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Thorium	2.22	ug/L	2	ug/L	110.8	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Vanadium	19.8	ug/L	20	ug/L	99.2	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3
	Zinc	20.3	ug/L	20	ug/L	101.5	80.0 − 120.0	MS	14−MAY−21 10:22	210514−3

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541202

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	13−MAY−21 20:16	210513−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	13−MAY−21 20:16	210513−1
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	14−MAY−21 09:23	210514−2
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	14−MAY−21 09:23	210514−2
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	14−MAY−21 10:19	210514−3
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	14−MAY−21 10:19	210514−3
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	14−MAY−21 10:19	210514−3
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	14−MAY−21 10:19	210514−3
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	14−MAY−21 10:19	210514−3
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	14−MAY−21 10:19	210514−3
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	14−MAY−21 10:19	210514−3
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 20:25	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 20:25	210513−1

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Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541202

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	14−MAY−21 09:32	210514−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	14−MAY−21 09:32	210514−2
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 10:36	210514−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 10:36	210514−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 10:36	210514−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Molybdenum	0.668	+/−1	J	0.2	1.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 10:36	210514−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 10:36	210514−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 10:36	210514−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 10:36	210514−3
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 20:45	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 20:45	210513−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	14−MAY−21 09:43	210514−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	14−MAY−21 09:43	210514−2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541202

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 10:46	210514−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 10:46	210514−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 10:46	210514−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Molybdenum	0.561	+/−1	J	0.2	1.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 10:46	210514−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 10:46	210514−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 10:46	210514−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 10:46	210514−3
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 21:03	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 21:03	210513−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 13:32	210514−3

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541202

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 13:32	210514−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 13:32	210514−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 13:32	210514−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 13:32	210514−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 13:32	210514−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 13:32	210514−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 13:32	210514−3
CCB04	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 21:20	210513−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 21:20	210513−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 14:09	210514−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 14:09	210514−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 14:09	210514−3

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Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541202

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 14:09	210514−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 14:09	210514−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 14:09	210514−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 14:09	210514−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 14:09	210514−3
CCB05										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 14:45	210514−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 14:45	210514−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 14:45	210514−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 14:45	210514−3

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541202

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 14:45	210514−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 14:45	210514−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 14:45	210514−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 14:45	210514−3
CCB06										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 15:22	210514−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 15:22	210514−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 15:22	210514−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 15:22	210514−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 15:22	210514−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541202

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 15:22	210514−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 15:22	210514−3
CCB07										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	14−MAY−21 15:36	210514−3
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	14−MAY−21 15:36	210514−3
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	14−MAY−21 15:36	210514−3
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	14−MAY−21 15:36	210514−3
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	14−MAY−21 15:36	210514−3
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 15:36	210514−3
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	14−MAY−21 15:36	210514−3

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541202

Contract: DMAX00801 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run

SW846

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541202
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204799704								
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Interference Check Sample

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0001	ug/L					13−MAY−21 20:20	210513−1
	Uranium−238	0.02	ug/L					13−MAY−21 20:20	210513−1
ICSAB01									
	Uranium−235	0.139	ug/L	.145	ug/L	95.5	80.0 − 120.0	13−MAY−21 20:21	210513−1
	Uranium−238	19.8	ug/L	19.86	ug/L	99.8	80.0 − 120.0	13−MAY−21 20:21	210513−1

METALS
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Interference Check Sample

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0001	ug/L					14−MAY−21 09:27	210514−2
	Uranium−238	0.01	ug/L					14−MAY−21 09:27	210514−2
ICSAB01									
	Uranium−235	0.134	ug/L	.145	ug/L	92.1	80.0 − 120.0	14−MAY−21 09:29	210514−2
	Uranium−238	17.9	ug/L	19.86	ug/L	90	80.0 − 120.0	14−MAY−21 09:29	210514−2

METALS
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Interference Check Sample

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	92600	ug/L	100000	ug/L	92.6	80.0 − 120.0	14−MAY−21 10:26	210514−3
	Antimony	0.162	ug/L					14−MAY−21 10:26	210514−3
	Arsenic	0.128	ug/L					14−MAY−21 10:26	210514−3
	Barium	2.78	ug/L					14−MAY−21 10:26	210514−3
	Beryllium	0.014	ug/L					14−MAY−21 10:26	210514−3
	Cadmium	0.961	ug/L					14−MAY−21 10:26	210514−3
	Calcium	91700	ug/L	100000	ug/L	91.7	80.0 − 120.0	14−MAY−21 10:26	210514−3
	Chromium	0.715	ug/L					14−MAY−21 10:26	210514−3
	Cobalt	0.481	ug/L					14−MAY−21 10:26	210514−3
	Copper	0.189	ug/L					14−MAY−21 10:26	210514−3
	Iron	87400	ug/L	100000	ug/L	87.4	80.0 − 120.0	14−MAY−21 10:26	210514−3
	Lead	0.181	ug/L					14−MAY−21 10:26	210514−3
	Magnesium	91000	ug/L	100000	ug/L	91.1	80.0 − 120.0	14−MAY−21 10:26	210514−3
	Manganese	6.05	ug/L					14−MAY−21 10:26	210514−3
	Molybdenum	1940	ug/L	2000	ug/L	97.1	80.0 − 120.0	14−MAY−21 10:26	210514−3
	Nickel	0.278	ug/L					14−MAY−21 10:26	210514−3
	Potassium	98700	ug/L	100000	ug/L	98.7	80.0 − 120.0	14−MAY−21 10:26	210514−3
	Selenium	0.197	ug/L					14−MAY−21 10:26	210514−3
	Silver	0.071	ug/L					14−MAY−21 10:26	210514−3
	Sodium	99300	ug/L	100000	ug/L	99.3	80.0 − 120.0	14−MAY−21 10:26	210514−3
	Thallium	0.09	ug/L					14−MAY−21 10:26	210514−3
	Thorium	2.1	ug/L					14−MAY−21 10:26	210514−3
	Vanadium	−0.063	ug/L					14−MAY−21 10:26	210514−3
	Zinc	0.837	ug/L					14−MAY−21 10:26	210514−3
ICSAB01									
	Aluminum	95400	ug/L	100000	ug/L	95.4	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Antimony	21.3	ug/L	20	ug/L	106	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Arsenic	20.6	ug/L	20	ug/L	103	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Barium	21.9	ug/L	22.35	ug/L	98.2	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Beryllium	19.6	ug/L	20	ug/L	98.1	80.0 − 120.0	14−MAY−21 10:29	210514−3

METALS
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Interference Check Sample

SDG No: 541202

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cadmium	20.2	ug/L	20.72	ug/L	97.7	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Calcium	92700	ug/L	100000	ug/L	92.7	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Chromium	20.1	ug/L	20	ug/L	101	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Cobalt	19.8	ug/L	20.65	ug/L	96	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Copper	18.0	ug/L	20	ug/L	90.2	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Iron	87800	ug/L	100000	ug/L	87.8	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Lead	19.3	ug/L	20	ug/L	96.7	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Magnesium	94400	ug/L	100000	ug/L	94.4	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Manganese	25.6	ug/L	25.72	ug/L	99.4	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Molybdenum	1970	ug/L	2000	ug/L	98.6	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Nickel	18.9	ug/L	20	ug/L	94.5	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Potassium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Selenium	20.7	ug/L	20	ug/L	104	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Silver	18.5	ug/L	20	ug/L	92.6	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Sodium	102000	ug/L	100000	ug/L	102	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Thallium	19.1	ug/L	20	ug/L	95.5	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Thorium	21.6	ug/L	20	ug/L	108	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Vanadium	19.8	ug/L	20	ug/L	99.1	80.0 − 120.0	14−MAY−21 10:29	210514−3
	Zinc	19.1	ug/L	20	ug/L	95.7	80.0 − 120.0	14−MAY−21 10:29	210514−3

METALS
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Matrix Spike Summary

SDG NO. 541202 **Client ID** MW−S30−04132021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201020 **Spike ID:** 1204799706

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Iron	ug/L	75−125	1950		33.0	U	2000	96.3		MS
Lead	ug/L	75−125	54.1		0.500	U	50.0	108		MS
Magnesium	ug/L	75−125	7220		5360		2000	93		MS
Manganese	ug/L	75−125	50.2		1.07	J	50.0	98.2		MS
Molybdenum	ug/L	75−125	54.0		0.235	J	50.0	107		MS
Nickel	ug/L	75−125	49.5		0.810	J	50.0	97.3		MS
Potassium	ug/L	75−125	5290		3300		2000	99.3		MS
Selenium	ug/L	75−125	51.4		2.00	U	50.0	103		MS
Silver	ug/L	75−125	54.0		0.300	U	50.0	108		MS
Sodium	ug/L		24400		23000		2000	68.3	N/A	MS
Thallium	ug/L	75−125	52.3		0.600	U	50.0	104		MS
Thorium	ug/L	75−125	54.2		0.700	U	50.0	108		MS
Uranium−235	ug/L	75−125	0.374		0.0100	U	0.360	104		MS
Uranium−238	ug/L	75−125	53.7		0.0670	U	49.6	108		MS
Vanadium	ug/L	75−125	50.0		3.30	U	50.0	97.7		MS
Zinc	ug/L	75−125	51.9		5.32	J	50.0	93.1		MS
Aluminum	ug/L	75−125	2010		26.3	J	2000	99.4		MS
Antimony	ug/L	75−125	56.6		1.36	J	50.0	111		MS
Arsenic	ug/L	75−125	51.1		2.00	U	50.0	101		MS
Barium	ug/L	75−125	70.9		17.8		50.0	106		MS
Beryllium	ug/L	75−125	56.6		0.200	U	50.0	113		MS
Cadmium	ug/L	75−125	52.6		0.300	U	50.0	105		MS

METALS
−5a−

Matrix Spike Summary

SDG NO.	541202	**Client ID**	MW−S30−04132021S
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	541201020	**Spike ID:**	1204799706

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Calcium	ug/L		22300		20900		2000	69.8	N/A	MS
Chromium	ug/L	75−125	48.9		3.00	U	50.0	97.1		MS
Cobalt	ug/L	75−125	48.8		0.300	U	50.0	97.4		MS
Copper	ug/L	75−125	49.6		0.445	J	50.0	98.2		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO. 541202 **Client ID** MW-S30-04132021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541201020 **Spike ID:** 1204799707

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75-125	2020		26.3	J	2000	99.7		MS
Antimony	ug/L	75-125	55.9		1.36	J	50.0	109		MS
Arsenic	ug/L	75-125	50.9		2.00	U	50.0	101		MS
Barium	ug/L	75-125	69.2		17.8		50.0	103		MS
Beryllium	ug/L	75-125	57.1		0.200	U	50.0	114		MS
Cadmium	ug/L	75-125	52.8		0.300	U	50.0	105		MS
Calcium	ug/L		22100		20900		2000	60.7	N/A	MS
Chromium	ug/L	75-125	48.8		3.00	U	50.0	96.8		MS
Cobalt	ug/L	75-125	47.9		0.300	U	50.0	95.6		MS
Copper	ug/L	75-125	49.3		0.445	J	50.0	97.7		MS
Iron	ug/L	75-125	1940		33.0	U	2000	95.8		MS
Lead	ug/L	75-125	53.6		0.500	U	50.0	107		MS
Magnesium	ug/L	75-125	7230		5360		2000	93.4		MS
Manganese	ug/L	75-125	48.8		1.07	J	50.0	95.5		MS
Molybdenum	ug/L	75-125	52.9		0.235	J	50.0	105		MS
Nickel	ug/L	75-125	48.8		0.810	J	50.0	96		MS
Potassium	ug/L	75-125	5270		3300		2000	98.3		MS
Selenium	ug/L	75-125	51.8		2.00	U	50.0	104		MS
Silver	ug/L	75-125	54.1		0.300	U	50.0	108		MS
Sodium	ug/L		23500		23000		2000	20.7	N/A	MS
Thallium	ug/L	75-125	51.4		0.600	U	50.0	103		MS
Thorium	ug/L	75-125	53.8		0.700	U	50.0	107		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO.	541202	**Client ID**	MW−S30−04132021SD
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	541201020	**Spike ID:**	1204799707

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.379		0.0100	U	0.360	105		MS
Uranium−238	ug/L	75−125	54.3		0.0670	U	49.6	109		MS
Vanadium	ug/L	75−125	49.2		3.30	U	50.0	96.2		MS
Zinc	ug/L	75−125	52.1		5.32	J	50.0	93.5		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−6−
Duplicate Sample Summary

SDG No.: 541202 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S30−04132021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799706 **Duplicate ID:** 1204799707 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2010		2020		.367		MS
Antimony	ug/L	+/−20	56.6		55.9		1.34		MS
Arsenic	ug/L	+/−20	51.1		50.9		.441		MS
Barium	ug/L	+/−20	70.9		69.2		2.53		MS
Beryllium	ug/L	+/−20	56.6		57.1		.964		MS
Cadmium	ug/L	+/−20	52.6		52.8		.319		MS
Calcium	ug/L	+/−20	22300		22100		.819		MS
Chromium	ug/L	+/−20	48.9		48.8		.336		MS
Cobalt	ug/L	+/−20	48.8		47.9		1.82		MS
Copper	ug/L	+/−20	49.6		49.3		.593		MS
Iron	ug/L	+/−20	1950		1940		.503		MS
Lead	ug/L	+/−20	54.1		53.6		.843		MS
Magnesium	ug/L	+/−20	7220		7230		.124		MS
Manganese	ug/L	+/−20	50.2		48.8		2.73		MS
Molybdenum	ug/L	+/−20	54.0		52.9		2.07		MS
Nickel	ug/L	+/−20	49.5		48.8		1.34		MS
Potassium	ug/L	+/−20	5290		5270		.371		MS
Selenium	ug/L	+/−20	51.4		51.8		.697		MS
Silver	ug/L	+/−20	54.0		54.1		.235		MS
Sodium	ug/L	+/−20	24400		23500		3.97		MS
Thallium	ug/L	+/−20	52.3		51.4		1.61		MS
Thorium	ug/L	+/−20	54.2		53.8		.891		MS
Uranium−235	ug/L	+/−20	0.374		0.379		1.46		MS
Uranium−238	ug/L	+/−20	53.7		54.3		1.11		MS
Vanadium	ug/L	+/−20	50.0		49.2		1.45		MS
Zinc	ug/L	+/−20	51.9		52.1		.416		MS

Metals
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Duplicate Sample Summary

SDG No.: 541202 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** MW−S30−04132021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204799706 **Duplicate ID:** 1204799707 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
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Laboratory Control Sample Summary

SDG NO. 541202

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204799705								
	Aluminum	ug/L	2000	2010		101	80−120	MS
	Antimony	ug/L	50.0	51.0		102	80−120	MS
	Arsenic	ug/L	50.0	47.4		94.9	80−120	MS
	Barium	ug/L	50.0	50.7		101	80−120	MS
	Beryllium	ug/L	50.0	57.3		115	80−120	MS
	Cadmium	ug/L	50.0	49.2		98.4	80−120	MS
	Calcium	ug/L	2000	2090		105	80−120	MS
	Chromium	ug/L	50.0	47.1		94.2	80−120	MS
	Cobalt	ug/L	50.0	47.8		95.6	80−120	MS
	Copper	ug/L	50.0	49.6		99.2	80−120	MS
	Iron	ug/L	2000	1900		95.1	80−120	MS
	Lead	ug/L	50.0	53.2		106	80−120	MS
	Magnesium	ug/L	2000	2070		104	80−120	MS
	Manganese	ug/L	50.0	47.8		95.5	80−120	MS
	Molybdenum	ug/L	50.0	50.8		102	80−120	MS
	Nickel	ug/L	50.0	48.4		96.8	80−120	MS
	Potassium	ug/L	2000	2090		104	80−120	MS
	Selenium	ug/L	50.0	49.0		98	80−120	MS
	Silver	ug/L	50.0	51.3		103	80−120	MS
	Sodium	ug/L	2000	2140		107	80−120	MS
	Thallium	ug/L	50.0	51.8		104	80−120	MS
	Thorium	ug/L	50.0	52.4		105	80−120	MS
	Uranium−235	ug/L	0.360	0.370		103	80−120	MS
	Uranium−238	ug/L	49.6	52.4		106	80−120	MS
	Vanadium	ug/L	50.0	48.1		96.3	80−120	MS
	Zinc	ug/L	50.0	50.8		102	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 541202 **Client ID** MW−S30−04132021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541201020 **Serial Dilution ID:** 1204799708

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	26.3	J	96.5	U	6.809			MS
Antimony	1.36	J	5	U	50.478			MS
Arsenic	2	U	10	U				MS
Barium	17.8		18.3	J	2.481			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	20900		19800		5.039		20	MS
Chromium	3	U	15	U				MS
Cobalt	.3	U	1.5	U				MS
Copper	.445	J	1.5	U	5.618			MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	5360		5060		5.506		20	MS
Manganese	1.07	J	5	U	3.558			MS
Molybdenum	.235	J	1	U	182.979			MS
Nickel	.81	J	3	U	8.025			MS
Potassium	3300		3060		7.291			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	23000		21000		9.07		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.01	U	.05	U				MS
Uranium−238	.067	U	.335	U				MS
Vanadium	3.3	U	16.5	U				MS
Zinc	5.32	J	16.5	U	90.436			MS

SW846

METALS
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Serial Dilution Sample Summary

SDG NO. 541202 **Client ID** MW-S30-04132021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541201020 **Serial Dilution ID:** 1204799708

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 541202 **Method Type**: MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2117234							
1204799704	MB for batch 2117234	MB	G	23−APR−21	50mL	50mL	
1204799705	LCS for batch 2117234	LCS	G	23−APR−21	50mL	50mL	
1204799706	MW−S30−04132021S	MS	G	23−APR−21	50mL	50mL	
1204799707	MW−S30−04132021SD	MSD	G	23−APR−21	50mL	50mL	
541202001	HA20−CMT−5S−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202002	HA20−CMT−5S−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202003	HA−09−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202004	HA−09−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202005	MW−S06−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202006	MW−S06−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202007	MW−S06−04132021DUP	SAMPLE	G	23−APR−21	50mL	50mL	
541202008	MW−S06−04132021DUP	SAMPLE	G	23−APR−21	50mL	50mL	
541202009	HA20−CMT−5I−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202010	HA20−CMT−5I−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202011	GZW−8−1−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202012	GZW−8−1−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202013	P1−A−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202014	P1−A−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202015	MW−BS03−04132021	SAMPLE	G	23−APR−21	50mL	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 541202 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
541202016	MW−BS03−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202017	MW−SD13−04132021	SAMPLE	G	23−APR−21	50mL	50mL	
541202018	MW−SD13−04132021	SAMPLE	G	23−APR−21	50mL	50mL	

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541202

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 13-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210513-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	20:09:26																							X	X		
S10	1	20:11:13																							X	X		
S100	1	20:13:00																							X	X		
ICV01	1	20:14:46																							X	X		
ICB01	1	20:16:35																							X	X		
CRDL01	1	20:18:23																							X	X		
ICSA01	1	20:20:11																							X	X		
ICSAB01	1	20:21:59																							X	X		
CCV01	1	20:23:46																							X	X		
CCB01	1	20:25:34																							X	X		
1204799704	1	20:27:22																							X	X		
1204799705	1	20:29:09																							X	X		
ZZZZZZ	1	20:30:56																										
1204799706	1	20:32:42																							X	X		
1204799707	1	20:34:29																							X	X		
ZZZZZZ	1	20:36:15																										
1204799708	5	20:38:02																							X	X		
541202001	1	20:39:48																							X	X		
541202002	1	20:41:35																							X	X		
CCV02	1	20:43:22																							X	X		
CCB02	1	20:45:10																							X	X		
541202003	1	20:46:58																							X	X		
541202004	1	20:48:45																							X	X		
541202005	1	20:50:31																							X	X		
541202006	1	20:52:18																							X	X		
541202007	1	20:54:05																							X	X		
541202008	1	20:55:51																							X	X		
541202009	1	20:57:38																							X	X		
541202010	1	20:59:24																							X	X		
CCV03	1	21:01:12																							X	X		
CCB03	1	21:03:00																							X	X		
541202011	1	21:04:47																							X	X		
541202012	1	21:06:34																							X	X		
541202013	1	21:08:20																							X	X		
541202014	1	21:10:06																							X	X		
ZZZZZZ	1	21:11:53																										
ZZZZZZ	1	21:13:39																										
541202017	1	21:15:25																							X	X		
541202018	1	21:17:12																							X	X		
CCV04	1	21:18:59																							X	X		
CCB04	1	21:20:47																							X	X		

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541202

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541202

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 14-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210514-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	09:16:33																							X	X		
S10	1	09:18:20																							X	X		
S100	1	09:20:07																							X	X		
ICV01	1	09:21:53																							X	X		
ICB01	1	09:23:41																							X	X		
CRDL01	1	09:25:29																							X	X		
ICSA01	1	09:27:18																							X	X		
ICSAB01	1	09:29:06																							X	X		
CCV01	1	09:30:53																							X	X		
CCB01	1	09:32:41																							X	X		
ZZZZZZ	1	09:34:29																										
ZZZZZZ	1	09:36:16																										
541202015	2	09:38:04																							X	X		
541202016	2	09:39:51																							X	X		
CCV02	1	09:41:39																							X	X		
CCB02	1	09:43:27																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541202

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 14-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210514-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	10:06:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	10:09:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	10:12:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	10:16:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	10:19:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	10:22:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	10:26:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	10:29:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	10:32:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	10:36:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	10:39:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	10:42:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	10:46:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	10:49:30																										
ZZZZZZ	1	10:52:48																										
ZZZZZZ	1	10:56:07																										
ZZZZZZ	10	10:59:27																										
ZZZZZZ	10	11:02:47																										
ZZZZZZ	1	11:06:06																										
ZZZZZZ	1	11:09:24																										
ZZZZZZ	1	11:12:43																										
ZZZZZZ	1	11:16:01																										
ZZZZZZ	5	11:19:19																										
CCV	1	11:22:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	11:25:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	11:29:22																										
ZZZZZZ	1	11:32:41																										
ZZZZZZ	1	11:36:00																										
ZZZZZZ	1	11:39:18																										
ZZZZZZ	1	11:42:36																										
ZZZZZZ	1	11:45:54																										
ZZZZZZ	5	11:49:13																										
ZZZZZZ	1	11:52:31																										
ZZZZZZ	1	11:55:49																										
CCV	1	11:59:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	12:02:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	12:05:48																										
ZZZZZZ	1	12:09:07																										
ZZZZZZ	1	12:12:25																										
ZZZZZZ	1	12:15:43																										
ZZZZZZ	10	12:19:03																										

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541202

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 14-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210514-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
ZZZZZZ	1	12:22:23																										
ZZZZZZ	1	12:25:41																										
ZZZZZZ	1	12:28:59																										
ZZZZZZ	1	12:32:17																										
ZZZZZZ	1	12:35:35																										
CCV	1	12:38:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	12:42:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	12:45:36																										
ZZZZZZ	1	12:48:54																										
ZZZZZZ	1	12:52:13																										
ZZZZZZ	1	12:55:32																										
ZZZZZZ	1	12:58:50																										
ZZZZZZ	10	13:02:16																										
ZZZZZZ	1	13:05:35																										
ZZZZZZ	1	13:08:54																										
ZZZZZZ	1	13:12:13																										
CCV	1	13:15:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB	1	13:18:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	10	13:22:51																										
ZZZZZZ	10	13:26:10																										
CCV03	1	13:29:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	13:32:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799704	1	13:36:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799705	1	13:39:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	13:42:49																										
1204799706	1	13:46:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204799707	1	13:49:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	13:52:46																										
1204799708	5	13:56:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202001	1	13:59:25	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
541202002	1	14:02:44	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	14:06:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	14:09:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202003	1	14:12:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202004	1	14:16:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202005	1	14:19:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202006	1	14:22:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202007	1	14:25:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202008	1	14:29:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202009	1	14:32:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202010	1	14:35:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541202

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 14-MAY-21 **End Date:** 14-MAY-21 **Data File:** 210514-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541202011	1	14:39:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV05	1	14:42:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	14:45:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202012	1	14:49:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202013	1	14:52:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202014	1	14:55:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202015	1	14:59:05	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202015	10	15:02:24							X																			
541202016	1	15:05:43	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202016	10	15:09:02							X																			
541202017	1	15:12:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202018	1	15:15:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV06	1	15:18:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB06	1	15:22:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
541202001	10	15:26:20											X															
541202002	10	15:29:38											X															
CCV07	1	15:32:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB07	1	15:36:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
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Instrument Detection Limits

SDG NO. 541202

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 541202

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2117234**
Analyst: Ridge Gleaton
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204799705	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204799705	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204799706	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204799706	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204799707	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204799707	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204799704 MB	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799705 LCS	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541201020	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799708 SDILT (541201020)	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799706 MS (541201020)	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
1204799707 MSD (541201020)	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202001	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202002	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202003	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202004	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202005	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202006	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202007	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202008	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202009	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202010	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202011	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202012	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202013	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202014	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202015	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202016	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202017	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2
541202018	23-APR-2021 16:30:35	Ground Water	50	04/23/21 22:30	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
3265774	HYDROCHLORIC ACID	2.5 mL
3267483	Concentrated Nitric Acid	1 mL

Comments:
Block Temperature (90-95C): 93 C
Temperature within limits (Y/N)?: y
Thermometer ID: 14302
Hot Block ID: 14
Digestion tube lot #: 2018043

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

May 13, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 541203

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on April 17, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541203

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 541203

May 13, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 17, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
541203001	MW-1-04152021
541203002	MW-1-04152021
541203003	HB-13-04152021
541203004	HB-13-04152021
541203005	MW-SD01-04152021
541203006	MW-SD01-04152021
541203007	HA20-CMT-2D1-04152021
541203008	HA20-CMT-2D1-04152021
541203009	MW-BS54-04152021
541203010	MW-BS54-04152021
541203011	EQ Blank1-04152021
541203012	EQ Blank1-04152021
541203013	MW-BS01-04152021
541203014	MW-BS01-04152021
541203015	GZW-11-2-04152021
541203016	GZW-11-2-04152021
541203017	HB-13-04152021-MSD
541203018	HB-13-04152021-MSD
541203019	HB-13-04152021-MS
541203020	HB-13-04152021-MS
541203021	GZW-10-2-04152021
541203022	GZW-10-2-04152021

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Meredith Boddiford

Meredith Boddiford for
Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page: 1 of 2
Project # 3252H
GEL Quote #: GELP18-1125
COC Number (1):
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

541203

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS) NI	Dissolved Metals (6020A ICP-MS) NI	U-235/U-238 plus Total U Calc. NI	Comments Note: extra sample is required for sample specific QC
MW-1-04152021	4/15/2021	9:10	N	Y	GW	U238		2	X	X	X	Total and Diss. ICP-MS List:
HB-13-04152021	4/15/2021	9:10	N	Y	GW	U238		2	X	X	X	
MW-SD01-04152021	4/15/2021	9:45	N	Y	GW	U238		2	X	X	X	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
HA20-CMT-2D1-04152021	4/15/2021	10:20	N	Y	GW	U238		2	X	X	X	
MW-BS54-04152021	4/15/2021	12:50	N	Y	GW	U238		2	X	X	X	
EQ Blank1-04152021	4/15/2021	11:00	N	Y	GW	U238		2	X	X	X	
MW-BS01-04152021	4/15/2021	13:45	N	Y	GW	U238		2	X	X	X	
GZW-11-2-04152021	4/15/2021	13:05	N	Y	GW	U238		2	X	X	X	U-235/U-238 plus Total U Calc. for Total and Dissolved
HB-13-04152021-MSD	4/15/2021	9:10	N	Y	GW	U238		2	X	X	X	
HB-13-04152021-MS	4/15/2021	9:10	N	Y	GW	U238		2	X	X	X	

<-- Preservative Type (6)

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/16/2021	0800	1	[signature]	4/16/21	0800
2	[signature]	4/16/21	1530	2	[signature]	41721	920
3				3			

TAT Requested: Normal: X Rush: ____ Specify: ______

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ *°C*

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* **- 3**, *6010B/7470A* **- 1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: No Radioactive material detected via NaI

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

Page: 2 of 2
Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]:
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: *GEL Project Manager: Zach Worsham*

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: de maximis, inc. Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS)	Dissolved Metals (6020A ICP-MS)	U-235/U-238 plus Total U Calc.
<-- Preservative Type (6)									NI	NI	NI
ZW-10-2-04152021	4/15/2021	13:05	N	Y	GW	U238		2	X	X	X
						U238					
						U238					
						U238					
						U238					
						U238					
						U238					
						U238					
						U238					
						U238					

Comments
Note: extra sample is required for sample specific QC

Total and Diss. ICP-MS List:

Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc

U-235/U-238 plus Total U Calc. for Total and Dissolved

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	4/16/2021	0800	1	[signature]	4/16/21	0800
2	[signature]	4/16/21	1830	2	[signature]	4 17 21	920
3				3			

TAT Requested: **Normal: X** **Rush:** _____ **Specify:** ________

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** _____ ***°C***

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:
No Radioactive material detected via NaI meter

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX	SDG/AR/COC/Work Order: 541203
Received By: Stacy Boone	Date Received: April 17, 2021
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7734 6884 6500 3°c 7734 6884 6451 4°c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:________
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR1-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?			✓	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) SEE ATTACHED
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

7734 6884 6716 3°c 7734 6884 5948 2°c

7734 6884 6201 3°c 7734 6884 6407 4°c

PM (or PMA) review: Initials MB Date 4/19/21 Page 1 of 2

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC SAMPLE RECEIPT & REVIEW CONTINUATION FORM

Client: DMAX Received By: SB Date Received: 4/17/21 SDG/AR/COC/Work Order: 541203

ID:	COC TIME:	SAMPLE TIME:
HB-10-04142021	14:30	16:05
HBPZ-2R-04142021	14:05	14:30
HA20-CMT-61-04142021	14:00	14:05
~~GW~~		
GZW-11-2-04152021	13:05	16:05

PM (or PMA) review: Initials MB Date 4/19/21 Page 2 of 2

Work Order Containers

Sample ID: **541203001**
Client Sample ID: **MW−1−04152021**
Description: **Ground Water**

Label: 541203001.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203001.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203002**
Client Sample ID: **MW−1−04152021**
Description: **Dissolved Ground Water**

Label: 541203002.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203002.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203003**
Client Sample ID: **HB−13−04152021**
Description: **Ground Water**

Label: 541203003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to

Work Order Containers

Sample ID: **541203003**
Client Sample ID: **HB−13−04152021**
Description: **Ground Water**

Label: 541203003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203003.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203004**
Client Sample ID: **HB−13−04152021**
Description: **Dissolved Ground Water**

Label: 541203004.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203004.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203005**
Client Sample ID: **MW−SD01−04152021**
Description: **Ground Water**

Label: 541203005.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Work Order Containers

Sample ID: **541203005**
Client Sample ID: **MW−SD01−04152021**
Description: **Ground Water**

Label: 541203005.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203006**
Client Sample ID: **MW−SD01−04152021**
Description: **Dissolved Ground Water**

Label: 541203006.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)
Label: 541203006.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203007**
Client Sample ID: **HA20−CMT−2D1−04152021**
Description: **Ground Water**

Label: 541203007.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)
Label: 541203007.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541203008**
Client Sample ID: **HA20−CMT−2D1−04152021**
Description: **Dissolved Ground Water**

Label: 541203008.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203008.01.01 **Type: New Undefined**

12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203009**
Client Sample ID: **MW−BS54−04152021**
Description: **Ground Water**

Label: 541203009.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203009.01.01 **Type: New Undefined**

12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203010**
Client Sample ID: **MW−BS54−04152021**
Description: **Dissolved Ground Water**

Label: 541203010.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to

Work Order Containers

Sample ID: **541203010**
Client Sample ID: **MW−BS54−04152021**
Description: **Dissolved Ground Water**

Label: 541203010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203010.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203011**
Client Sample ID: **EQ Blank1−04152021**
Description: **Ground Water**

Label: 541203011.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203011.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203012**
Client Sample ID: **EQ Blank1−04152021**
Description: **Dissolved Ground Water**

Label: 541203012.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Work Order Containers

Sample ID: **541203012**
Client Sample ID: **EQ Blank1−04152021**
Description: **Dissolved Ground Water**

Label: 541203012.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203013**
Client Sample ID: **MW−BS01−04152021**
Description: **Ground Water**

Label: 541203013.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203013.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203014**
Client Sample ID: **MW−BS01−04152021**
Description: **Dissolved Ground Water**

Label: 541203014.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203014.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **541203015**
Client Sample ID: **GZW−11−2−04152021**
Description: **Ground Water**

Label: 541203015.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203015.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203016**
Client Sample ID: **GZW−11−2−04152021**
Description: **Dissolved Ground Water**

Label: 541203016.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203016.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203017**
Client Sample ID: **HB−13−04152021−MSD**
Description: **Ground Water**

Label: 541203017.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541203018**
Client Sample ID: **HB−13−04152021−MSD**
Description: **Dissolved Ground Water**

Label: 541203018.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)

Sample ID: **541203019**
Client Sample ID: **HB−13−04152021−MS**
Description: **Ground Water**

Label: 541203019.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)

Sample ID: **541203020**
Client Sample ID: **HB−13−04152021−MS**
Description: **Dissolved Ground Water**

Label: 541203020.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)

Sample ID: **541203021**
Client Sample ID: **GZW−10−2−04152021**
Description: **Ground Water**

Label: 541203021.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)

Label: 541203021.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **541203022**
Client Sample ID: **GZW−10−2−04152021**
Description: **Dissolved Ground Water**

Label: 541203022.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
17−APR−21 14:53:11	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **541203022**
Client Sample ID: **GZW−10−2−04152021**
Description: **Dissolved Ground Water**

Label: 541203022.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
21−APR−21 19:06:38	Hannah Hatherly	Transfered custody to batch 2118255
21−APR−21 19:06:38	Hannah Hatherly	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
21−APR−21 21:57:13	Hannah Hatherly	Changed batch_id from 2118255 to
21−APR−21 21:57:13	Hannah Hatherly	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
22−APR−21 08:04:54	Caroline Gause	Changed sample location from Return Shelf Chemistry Samples to Main Cooler #003 (Non Rad Liquids)
Label: 541203022.01.01	**Type: New Undefined**	
12−MAY−21 16:27:45	Paul Boyd	Transfered custody to batch 2118256
12−MAY−21 16:27:45	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 13 May 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122020−34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 541203

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batch:</u> 2118256

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2128054

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batch:</u> 2118255

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
541203001	MW-1-04152021
541203002	MW-1-04152021
541203003	HB-13-04152021
541203004	HB-13-04152021
541203005	MW-SD01-04152021
541203006	MW-SD01-04152021
541203007	HA20-CMT-2D1-04152021
541203008	HA20-CMT-2D1-04152021
541203009	MW-BS54-04152021
541203010	MW-BS54-04152021
541203011	EQ Blank1-04152021
541203012	EQ Blank1-04152021
541203013	MW-BS01-04152021
541203014	MW-BS01-04152021
541203015	GZW-11-2-04152021
541203016	GZW-11-2-04152021
541203021	GZW-10-2-04152021
541203022	GZW-10-2-04152021
1204801994	Method Blank (MB)**ICP-MS**
1204801995	Laboratory Control Sample (LCS)
1204801998	541203003(HB-13-04152021L) Serial Dilution (SD)
1204802001	541203004(HB-13-04152021L) Serial Dilution (SD)
1204801996	541203003(HB-13-04152021S) Matrix Spike (MS)
1204801999	541203004(HB-13-04152021S) Matrix Spike (MS)
1204801997	541203003(HB-13-04152021SD) Matrix Spike Duplicate (MSD)
1204802000	541203004(HB-13-04152021SD) Matrix Spike Duplicate (MSD)

Samples 541203001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 021 and 022 in this

SDG were analyzed for metals on an "as received" basis.
Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements
The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. ICP-MS.

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 541203001 (MW-1-04152021), 541203002 (MW-1-04152021), 541203003 (HB-13-04152021), 541203004 (HB-13-04152021), 541203007 (HA20-CMT-2D1-04152021), 541203008 (HA20-CMT-2D1-04152021), 541203021 (GZW-10-2-04152021) and 541203022 (GZW-10-2-04152021)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	541203							
	001	**002**	**003**	**004**	**007**	**008**	**021**	**022**
Calcium	1X	1X	1X	1X	1X	1X	50X	50X
Manganese	1X	1X	1X	1X	25X	25X	50X	50X
Sodium	20X	20X	1X	1X	25X	25X	1X	1X
Uranium-235	1X	1X	50X	50X	1X	1X	1X	1X
Uranium-238	1X	1X	50X	50X	1X	1X	1X	1X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 541203 GEL Work Order: 541203

The Qualifiers in this report are defined as follows:

*   Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
**   Indicates analyte is a surrogate compound.
J   Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
U   Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name:** **Jamie Johnson**

Date: **14 MAY 2021** **Title:** **Group Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203001 **BASIS:** As Received **DATE COLLECTED** 15−APR−21

CLIENT ID: MW−1−04152021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	26.1	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−39−3	Barium	21.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−70−2	Calcium	18000	ug/L		80.0	200	200	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−48−4	Cobalt	4.84	ug/L		0.300	1.00	1.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−50−8	Copper	2.84	ug/L		0.300	2.00	2.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7439−95−4	Magnesium	4470	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7439−96−5	Manganese	13.6	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7439−98−7	Molybdenum	12.3	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−02−0	Nickel	2.31	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−09−7	Potassium	2920	ug/L		80.0	300	300	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−23−5	Sodium	94900	ug/L		1600	5000	5000	20	MS	PRB	05/13/21 17:39	210513−5	2118256
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:00	210513−5	2118256
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 11:37	210513−2	2118256
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 11:37	210513−2	2118256
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 23:41	210512−1	2118256
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 23:41	210512−1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203002 **BASIS:** Filtered **DATE COLLECTED** 15−APR−21

CLIENT ID: MW−1−04152021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−39−3	Barium	21.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−70−2	Calcium	17300	ug/L		80.0	200	200	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−48−4	Cobalt	4.72	ug/L		0.300	1.00	1.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−50−8	Copper	1.92	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7439−95−4	Magnesium	4470	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7439−96−5	Manganese	11.5	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7439−98−7	Molybdenum	12.2	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−02−0	Nickel	2.36	ug/L		0.600	2.00	2.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−09−7	Potassium	2890	ug/L		80.0	300	300	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−23−5	Sodium	95200	ug/L		1600	5000	5000	20	MS	PRB	05/13/21 17:06	210513−5	2118256
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:04	210513−5	2118256
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 11:39	210513−2	2118256
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 11:39	210513−2	2118256
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 23:45	210512−1	2118256
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 23:45	210512−1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203003 **BASIS:** As Received **DATE COLLECTED** 15−APR−21

CLIENT ID: HB−13−04152021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	56.8	ug/L		19.3	50.0	50.0	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−39−3	Barium	8.54	ug/L		0.670	4.00	4.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−70−2	Calcium	16500	ug/L		80.0	200	200	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−48−4	Cobalt	1.46	ug/L		0.300	1.00	1.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−50−8	Copper	11.3	ug/L		0.300	2.00	2.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7439−89−6	Iron	72.4	ug/L	J	33.0	100	100	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7439−95−4	Magnesium	4510	ug/L		10.0	30.0	30.0	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7439−96−5	Manganese	27.4	ug/L		1.00	5.00	5.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7439−98−7	Molybdenum	338	ug/L		0.200	1.00	1.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−02−0	Nickel	1.64	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−09−7	Potassium	2680	ug/L		80.0	300	300	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−23−5	Sodium	15800	ug/L		80.0	250	250	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:13	210513−5	2118256
7440−61−1	Total Uranium	3080	ug/L		3.35	10.0	10.0			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	6.45	ug/L		0.500	3.50	3.50	50	MS	PRB	05/13/21 11:52	210513−2	2118256
7440−61−1	Uranium−238	3080	ug/L		3.35	10.0	10.0	50	MS	PRB	05/13/21 11:52	210513−2	2118256
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/12/21 23:49	210512−1	2118256
7440−66−6	Zinc	4.39	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/12/21 23:49	210512−1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203004 **BASIS:** Filtered **DATE COLLECTED** 15-APR-21

CLIENT ID: HB-13-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-39-3	Barium	8.43	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-70-2	Calcium	16300	ug/L		80.0	200	200	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-48-4	Cobalt	1.28	ug/L		0.300	1.00	1.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-50-8	Copper	9.73	ug/L		0.300	2.00	2.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7439-95-4	Magnesium	4450	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7439-96-5	Manganese	24.5	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7439-98-7	Molybdenum	339	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-02-0	Nickel	1.60	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-09-7	Potassium	2580	ug/L		80.0	300	300	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-23-5	Sodium	15600	ug/L		80.0	250	250	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:22	210513-5	2118256
7440-61-1	Total Uranium	3030	ug/L		3.35	10.0	10.0			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	6.36	ug/L		0.500	3.50	3.50	50	MS	PRB	05/13/21 12:11	210513-2	2118256
7440-61-1	Uranium-238	3020	ug/L		3.35	10.0	10.0	50	MS	PRB	05/13/21 12:11	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:14	210512-1	2118256
7440-66-6	Zinc	4.63	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:14	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203005 **BASIS:** As Received **DATE COLLECTED** 15-APR-21

CLIENT ID: MW-SD01-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	60.8	ug/L		19.3	50.0	50.0	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-36-0	Antimony	1.33	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-39-3	Barium	16.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-70-2	Calcium	13900	ug/L		80.0	200	200	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-48-4	Cobalt	1.22	ug/L		0.300	1.00	1.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-50-8	Copper	2.38	ug/L		0.300	2.00	2.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7439-89-6	Iron	94.8	ug/L	J	33.0	100	100	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7439-95-4	Magnesium	3120	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7439-96-5	Manganese	3.09	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7439-98-7	Molybdenum	17.7	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-02-0	Nickel	0.931	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-09-7	Potassium	3990	ug/L		80.0	300	300	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-23-5	Sodium	24300	ug/L		80.0	250	250	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:36	210513-5	2118256
7440-61-1	Total Uranium	8.49	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0200	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:18	210513-2	2118256
7440-61-1	Uranium-238	8.47	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:18	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:32	210512-1	2118256
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:32	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203006 **BASIS:** Filtered **DATE COLLECTED** 15−APR−21

CLIENT ID: MW−SD01−04152021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−36−0	Antimony	1.26	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−39−3	Barium	15.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−70−2	Calcium	14300	ug/L		80.0	200	200	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−48−4	Cobalt	1.22	ug/L		0.300	1.00	1.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−50−8	Copper	2.18	ug/L		0.300	2.00	2.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7439−95−4	Magnesium	3040	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7439−96−5	Manganese	1.65	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7439−98−7	Molybdenum	16.3	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−02−0	Nickel	0.992	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−09−7	Potassium	4080	ug/L		80.0	300	300	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−23−5	Sodium	23900	ug/L		80.0	250	250	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:41	210513−5	2118256
7440−61−1	Total Uranium	5.92	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0137	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:20	210513−2	2118256
7440−61−1	Uranium−238	5.91	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:20	210513−2	2118256
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:36	210512−1	2118256
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:36	210512−1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203007 **BASIS:** As Received **DATE COLLECTED** 15−APR−21

CLIENT ID: HA20−CMT−2D1−04152021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	42.5	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−38−2	Arsenic	3.30	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−39−3	Barium	40.0	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−70−2	Calcium	32400	ug/L		80.0	200	200	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−48−4	Cobalt	0.855	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7439−89−6	Iron	194	ug/L		33.0	100	100	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7439−95−4	Magnesium	5000	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7439−96−5	Manganese	1260	ug/L		25.0	125	125	25	MS	PRB	05/13/21 17:45	210513−5	2118256
7439−98−7	Molybdenum	41.7	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−02−0	Nickel	0.755	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−09−7	Potassium	6050	ug/L		80.0	300	300	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−23−5	Sodium	169000	ug/L		2000	6250	6250	25	MS	PRB	05/13/21 17:45	210513−5	2118256
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:43	210513−5	2118256
7440−61−1	Total Uranium	84.7	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.622	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:22	210513−2	2118256
7440−61−1	Uranium−238	84.1	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:22	210513−2	2118256
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:39	210512−1	2118256
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:39	210512−1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203008 **BASIS:** Filtered **DATE COLLECTED** 15-APR-21

CLIENT ID: HA20-CMT-2D1-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-38-2	Arsenic	3.27	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-39-3	Barium	46.3	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-70-2	Calcium	36700	ug/L		80.0	200	200	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-48-4	Cobalt	0.889	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-50-8	Copper	0.329	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7439-89-6	Iron	156	ug/L		33.0	100	100	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7439-95-4	Magnesium	5720	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7439-96-5	Manganese	1350	ug/L		25.0	125	125	25	MS	PRB	05/13/21 17:49	210513-5	2118256
7439-98-7	Molybdenum	43.1	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-02-0	Nickel	1.06	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-09-7	Potassium	6580	ug/L		80.0	300	300	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-23-5	Sodium	182000	ug/L		2000	6250	6250	25	MS	PRB	05/13/21 17:49	210513-5	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:47	210513-5	2118256
7440-61-1	Total Uranium	88.5	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.644	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:24	210513-2	2118256
7440-61-1	Uranium-238	87.8	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:24	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:43	210512-1	2118256
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:43	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203009 **BASIS:** As Received **DATE COLLECTED** 15-APR-21

CLIENT ID: MW-BS54-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	131	ug/L		19.3	50.0	50.0	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-38-2	Arsenic	2.05	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-39-3	Barium	46.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-70-2	Calcium	48000	ug/L		80.0	200	200	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-48-4	Cobalt	0.784	ug/L	J	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-50-8	Copper	2.21	ug/L		0.300	2.00	2.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7439-89-6	Iron	790	ug/L		33.0	100	100	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7439-92-1	Lead	1.39	ug/L	J	0.500	2.00	2.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7439-95-4	Magnesium	17200	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7439-96-5	Manganese	109	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7439-98-7	Molybdenum	6.20	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-02-0	Nickel	1.38	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-09-7	Potassium	4680	ug/L		80.0	300	300	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-23-5	Sodium	27500	ug/L		80.0	250	250	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:51	210513-5	2118256
7440-61-1	Total Uranium	0.280	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:25	210513-2	2118256
7440-61-1	Uranium-238	0.280	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:25	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:46	210512-1	2118256
7440-66-6	Zinc	4.50	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:46	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203010 **BASIS:** Filtered **DATE COLLECTED** 15-APR-21

CLIENT ID: MW-BS54-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-39-3	Barium	43.8	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-70-2	Calcium	46900	ug/L		80.0	200	200	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7439-89-6	Iron	426	ug/L		33.0	100	100	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7439-95-4	Magnesium	17400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7439-96-5	Manganese	96.1	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7439-98-7	Molybdenum	6.30	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-02-0	Nickel	0.634	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-09-7	Potassium	4860	ug/L		80.0	300	300	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-23-5	Sodium	28900	ug/L		80.0	250	250	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:53	210513-5	2118256
7440-61-1	Total Uranium	0.204	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:31	210513-2	2118256
7440-61-1	Uranium-238	0.204	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:31	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:57	210512-1	2118256
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 00:57	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203011 **BASIS:** As Received **DATE COLLECTED** 15−APR−21

CLIENT ID: EQ Blank1−04152021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−39−3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−70−2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7439−95−4	Magnesium	10.0	ug/L	U	10.0	30.0	30.0	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7439−96−5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7439−98−7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−09−7	Potassium	80.0	ug/L	U	80.0	300	300	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−23−5	Sodium	80.0	ug/L	U	80.0	250	250	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 17:59	210513−5	2118256
7440−61−1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:33	210513−2	2118256
7440−61−1	Uranium−238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:33	210513−2	2118256
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:01	210512−1	2118256
7440−66−6	Zinc	4.43	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:01	210512−1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203012 **BASIS:** Filtered **DATE COLLECTED** 15-APR-21

CLIENT ID: EQ Blank1-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-39-3	Barium	0.670	ug/L	U	0.670	4.00	4.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-70-2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7439-95-4	Magnesium	10.0	ug/L	U	10.0	30.0	30.0	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7439-96-5	Manganese	1.00	ug/L	U	1.00	5.00	5.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7439-98-7	Molybdenum	0.200	ug/L	U	0.200	1.00	1.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-09-7	Potassium	80.0	ug/L	U	80.0	300	300	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-23-5	Sodium	80.0	ug/L	U	80.0	250	250	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 18:01	210513-5	2118256
7440-61-1	Total Uranium	0.0670	ug/L	U	0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:34	210513-2	2118256
7440-61-1	Uranium-238	0.0670	ug/L	U	0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:34	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:04	210512-1	2118256
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:04	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203013 **BASIS:** As Received **DATE COLLECTED** 15-APR-21

CLIENT ID: MW-BS01-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	235	ug/L		19.3	50.0	50.0	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-36-0	Antimony	2.05	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-38-2	Arsenic	10.5	ug/L		2.00	5.00	5.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-39-3	Barium	11.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-70-2	Calcium	26700	ug/L		80.0	200	200	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-50-8	Copper	2.44	ug/L		0.300	2.00	2.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7439-89-6	Iron	159	ug/L		33.0	100	100	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7439-95-4	Magnesium	8520	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7439-96-5	Manganese	10.9	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7439-98-7	Molybdenum	7.95	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-02-0	Nickel	0.700	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-09-7	Potassium	6890	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-23-5	Sodium	33500	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 18:03	210513-5	2118256
7440-61-1	Total Uranium	6.73	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0470	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:36	210513-2	2118256
7440-61-1	Uranium-238	6.69	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:36	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:08	210512-1	2118256
7440-66-6	Zinc	17.3	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:08	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203014 **BASIS:** Filtered **DATE COLLECTED** 15-APR-21

CLIENT ID: MW-BS01-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	99.5	ug/L		19.3	50.0	50.0	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-36-0	Antimony	1.91	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-38-2	Arsenic	10.1	ug/L		2.00	5.00	5.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-39-3	Barium	13.6	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-70-2	Calcium	25700	ug/L		80.0	200	200	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-50-8	Copper	0.513	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7439-95-4	Magnesium	8150	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7439-96-5	Manganese	1.24	ug/L	J	1.00	5.00	5.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7439-98-7	Molybdenum	7.73	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-09-7	Potassium	6620	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-23-5	Sodium	32700	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 18:05	210513-5	2118256
7440-61-1	Total Uranium	6.41	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0450	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:38	210513-2	2118256
7440-61-1	Uranium-238	6.37	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:38	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:12	210512-1	2118256
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:12	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203015 **BASIS:** As Received **DATE COLLECTED** 15-APR-21

CLIENT ID: GZW-11-2-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	40.2	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-36-0	Antimony	1.97	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-38-2	Arsenic	8.17	ug/L		2.00	5.00	5.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-39-3	Barium	13.5	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-70-2	Calcium	23500	ug/L		80.0	200	200	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-50-8	Copper	5.62	ug/L		0.300	2.00	2.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7439-89-6	Iron	141	ug/L		33.0	100	100	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7439-95-4	Magnesium	10600	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7439-96-5	Manganese	68.6	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7439-98-7	Molybdenum	10.8	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-02-0	Nickel	1.51	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-09-7	Potassium	4070	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-23-5	Sodium	14100	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 18:07	210513-5	2118256
7440-61-1	Total Uranium	1.05	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:40	210513-2	2118256
7440-61-1	Uranium-238	1.05	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:40	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:15	210512-1	2118256
7440-66-6	Zinc	58.9	ug/L		3.30	20.0	20.0	1	MS	PRB	05/13/21 01:15	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203016 **BASIS:** Filtered **DATE COLLECTED** 15−APR−21

CLIENT ID: GZW−11−2−04152021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−36−0	Antimony	1.37	ug/L	J	1.00	3.00	3.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−38−2	Arsenic	7.50	ug/L		2.00	5.00	5.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−39−3	Barium	12.2	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−70−2	Calcium	23100	ug/L		80.0	200	200	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−50−8	Copper	1.69	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7439−95−4	Magnesium	10300	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7439−96−5	Manganese	53.5	ug/L		1.00	5.00	5.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7439−98−7	Molybdenum	11.0	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−02−0	Nickel	1.37	ug/L	J	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−09−7	Potassium	4020	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−23−5	Sodium	13800	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 18:09	210513−5	2118256
7440−61−1	Total Uranium	1.03	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:42	210513−2	2118256
7440−61−1	Uranium−238	1.03	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:42	210513−2	2118256
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:19	210512−1	2118256
7440−66−6	Zinc	46.8	ug/L		3.30	20.0	20.0	1	MS	PRB	05/13/21 01:19	210512−1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203021 **BASIS:** As Received **DATE COLLECTED** 15−APR−21

CLIENT ID: GZW−10−2−04152021 **LEVEL:** Low **DATE RECEIVED** 17−APR−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	27.6	ug/L	J	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−36−0	Antimony	4.22	ug/L		1.00	3.00	3.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−38−2	Arsenic	2.37	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−39−3	Barium	45.1	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−70−2	Calcium	83500	ug/L		4000	10000	10000	50	MS	PRB	05/13/21 18:26	210513−5	2118256
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−48−4	Cobalt	2.67	ug/L		0.300	1.00	1.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−50−8	Copper	0.952	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7439−89−6	Iron	55.8	ug/L	J	33.0	100	100	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7439−95−4	Magnesium	28800	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7439−96−5	Manganese	3140	ug/L		50.0	250	250	50	MS	PRB	05/13/21 18:26	210513−5	2118256
7439−98−7	Molybdenum	8.88	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−02−0	Nickel	4.66	ug/L		0.600	2.00	2.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−09−7	Potassium	6530	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−23−5	Sodium	32500	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 18:11	210513−5	2118256
7440−61−1	Total Uranium	63.5	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117−96−1	Uranium−235	0.466	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:43	210513−2	2118256
7440−61−1	Uranium−238	63.1	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:43	210513−2	2118256
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:23	210512−1	2118256
7440−66−6	Zinc	12.5	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:23	210512−1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 541203 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 541203022 **BASIS:** Filtered **DATE COLLECTED** 15-APR-21

CLIENT ID: GZW-10-2-04152021 **LEVEL:** Low **DATE RECEIVED** 17-APR-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-36-0	Antimony	3.53	ug/L		1.00	3.00	3.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-38-2	Arsenic	2.09	ug/L	J	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-39-3	Barium	44.9	ug/L		0.670	4.00	4.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-70-2	Calcium	80700	ug/L		4000	10000	10000	50	MS	PRB	05/13/21 18:28	210513-5	2118256
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-48-4	Cobalt	1.80	ug/L		0.300	1.00	1.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-50-8	Copper	0.377	ug/L	J	0.300	2.00	2.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7439-95-4	Magnesium	28400	ug/L		10.0	30.0	30.0	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7439-96-5	Manganese	3020	ug/L		50.0	250	250	50	MS	PRB	05/13/21 18:28	210513-5	2118256
7439-98-7	Molybdenum	8.23	ug/L		0.200	1.00	1.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-02-0	Nickel	3.70	ug/L		0.600	2.00	2.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-09-7	Potassium	6520	ug/L		80.0	300	300	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-23-5	Sodium	32800	ug/L		80.0	250	250	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	05/13/21 18:13	210513-5	2118256
7440-61-1	Total Uranium	63.9	ug/L		0.0670	0.200	0.200			JJ2	05/14/21 13:20		2128054
15117-96-1	Uranium-235	0.458	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	05/13/21 12:45	210513-2	2118256
7440-61-1	Uranium-238	63.5	ug/L		0.0670	0.200	0.200	1	MS	PRB	05/13/21 12:45	210513-2	2118256
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:26	210512-1	2118256
7440-66-6	Zinc	4.62	ug/L	J	3.30	20.0	20.0	1	MS	PRB	05/13/21 01:26	210512-1	2118256

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2118256	2118255	SW846 3005A	50	mL	50	mL	04/22/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Aluminum	4900	ug/L	5050	ug/L	97.1	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Antimony	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Arsenic	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Barium	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Beryllium	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Cadmium	50.1	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Calcium	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Chromium	48.9	ug/L	50	ug/L	97.7	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Cobalt	50.5	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Copper	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Iron	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Lead	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Magnesium	5210	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Manganese	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Molybdenum	48.4	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Nickel	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Potassium	5220	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Selenium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Silver	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Sodium	4910	ug/L	5000	ug/L	98.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Thallium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Vanadium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Zinc	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	12−MAY−21 22:58	210512−1
	Uranium−235	0.37	ug/L	0.36	ug/L	102	90.0 − 110.0	MS	13−MAY−21 11:21	210513−2
	Uranium−238	50.4	ug/L	49.64	ug/L	101.5	90.0 − 110.0	MS	13−MAY−21 11:21	210513−2
	Calcium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	13−MAY−21 16:05	210513−5
	Manganese	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	13−MAY−21 16:05	210513−5
	Sodium	4980	ug/L	5000	ug/L	99.6	90.0 − 110.0	MS	13−MAY−21 16:05	210513−5
	Thorium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	13−MAY−21 16:05	210513−5
CCV01										
	Aluminum	4860	ug/L	5050	ug/L	96.2	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Antimony	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Arsenic	49.8	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Barium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Beryllium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Cadmium	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Calcium	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Chromium	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Cobalt	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Copper	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Iron	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Lead	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Magnesium	5160	ug/L	5000	ug/L	103.2	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Manganese	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Molybdenum	51.5	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Nickel	52.9	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Potassium	5350	ug/L	5000	ug/L	106.9	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Selenium	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Silver	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Sodium	4930	ug/L	5000	ug/L	98.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Thallium	49.2	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Vanadium	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Zinc	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	12−MAY−21 23:16	210512−1
	Uranium−235	0.37	ug/L	0.36	ug/L	102.5	90.0 − 110.0	MS	13−MAY−21 11:30	210513−2
	Uranium−238	50.4	ug/L	49.64	ug/L	101.4	90.0 − 110.0	MS	13−MAY−21 11:30	210513−2
	Calcium	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	13−MAY−21 16:15	210513−5
	Manganese	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	13−MAY−21 16:15	210513−5
	Sodium	5010	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	13−MAY−21 16:15	210513−5
	Thorium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	13−MAY−21 16:15	210513−5
CCV02										
	Aluminum	4940	ug/L	5050	ug/L	97.9	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Antimony	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Arsenic	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Barium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Beryllium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Cadmium	49.6	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Calcium	4990	ug/L	5000	ug/L	99.9	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Chromium	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Cobalt	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Copper	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Iron	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Lead	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Magnesium	5280	ug/L	5000	ug/L	105.7	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Manganese	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Molybdenum	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Nickel	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Potassium	5240	ug/L	5000	ug/L	104.8	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Selenium	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Silver	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Sodium	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Thallium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Vanadium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Zinc	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	12−MAY−21 23:27	210512−1
	Uranium−235	0.37	ug/L	0.36	ug/L	103	90.0 − 110.0	MS	13−MAY−21 11:48	210513−2
	Uranium−238	51	ug/L	49.64	ug/L	102.6	90.0 − 110.0	MS	13−MAY−21 11:48	210513−2
	Calcium	4920	ug/L	5000	ug/L	98.4	90.0 − 110.0	MS	13−MAY−21 16:52	210513−5
	Manganese	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	13−MAY−21 16:52	210513−5
	Sodium	4970	ug/L	5000	ug/L	99.4	90.0 − 110.0	MS	13−MAY−21 16:52	210513−5
	Thorium	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	13−MAY−21 16:52	210513−5
CCV03										
	Aluminum	4940	ug/L	5050	ug/L	97.7	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Antimony	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Arsenic	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	51	ug/L	50	ug/L	101.9	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Beryllium	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Cadmium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Chromium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Cobalt	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Copper	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Iron	4850	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Lead	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Magnesium	5190	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Manganese	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Molybdenum	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Nickel	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Potassium	5250	ug/L	5000	ug/L	105	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Selenium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Silver	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Sodium	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Thallium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Vanadium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Zinc	50.4	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	13−MAY−21 00:07	210512−1
	Uranium−235	0.36	ug/L	0.36	ug/L	101.4	90.0 − 110.0	MS	13−MAY−21 12:06	210513−2
	Uranium−238	51.6	ug/L	49.64	ug/L	104	90.0 − 110.0	MS	13−MAY−21 12:06	210513−2
	Calcium	4840	ug/L	5000	ug/L	96.8	90.0 − 110.0	MS	13−MAY−21 17:08	210513−5
	Manganese	49.1	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	13−MAY−21 17:08	210513−5
	Sodium	4850	ug/L	5000	ug/L	96.9	90.0 − 110.0	MS	13−MAY−21 17:08	210513−5
	Thorium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	13−MAY−21 17:08	210513−5
CCV04										
	Aluminum	4880	ug/L	5050	ug/L	96.6	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Antimony	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Arsenic	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Barium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Beryllium	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Cadmium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Calcium	4920	ug/L	5000	ug/L	98.4	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Chromium	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Cobalt	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Copper	52.6	ug/L	50	ug/L	105.1	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Iron	5000	ug/L	5000	ug/L	100.1	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Lead	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Magnesium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Manganese	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Molybdenum	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Nickel	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Potassium	5270	ug/L	5000	ug/L	105.3	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Selenium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Silver	49.7	ug/L	50	ug/L	99.4	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Sodium	5090	ug/L	5000	ug/L	101.8	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Thallium	49.5	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Vanadium	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Zinc	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	13−MAY−21 00:50	210512−1
	Uranium−235	0.37	ug/L	0.36	ug/L	101.8	90.0 − 110.0	MS	13−MAY−21 12:27	210513−2
	Uranium−238	49.5	ug/L	49.64	ug/L	99.8	90.0 − 110.0	MS	13−MAY−21 12:27	210513−2
	Calcium	4750	ug/L	5000	ug/L	95.1	90.0 − 110.0	MS	13−MAY−21 17:32	210513−5
	Manganese	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	13−MAY−21 17:32	210513−5
	Sodium	4650	ug/L	5000	ug/L	93.1	90.0 − 110.0	MS	13−MAY−21 17:32	210513−5
	Thorium	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	13−MAY−21 17:32	210513−5
CCV05										
	Aluminum	4900	ug/L	5050	ug/L	97	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Antimony	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Arsenic	48.6	ug/L	50	ug/L	97.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Barium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Beryllium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cadmium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Chromium	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Cobalt	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Copper	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Iron	4880	ug/L	5000	ug/L	97.6	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Lead	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Magnesium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Manganese	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Molybdenum	48.6	ug/L	50	ug/L	97.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Nickel	50.2	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Potassium	5210	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Selenium	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Silver	49.9	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Sodium	4900	ug/L	5000	ug/L	98.1	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Thallium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Vanadium	49.3	ug/L	50	ug/L	98.5	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Zinc	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	13−MAY−21 01:30	210512−1
	Uranium−235	0.37	ug/L	0.36	ug/L	103.2	90.0 − 110.0	MS	13−MAY−21 12:47	210513−2
	Uranium−238	50.5	ug/L	49.64	ug/L	101.8	90.0 − 110.0	MS	13−MAY−21 12:47	210513−2
	Calcium	4650	ug/L	5000	ug/L	93.1	90.0 − 110.0	MS	13−MAY−21 17:55	210513−5
	Manganese	46.5	ug/L	50	ug/L	92.9	90.0 − 110.0	MS	13−MAY−21 17:55	210513−5
	Sodium	4610	ug/L	5000	ug/L	92.2	90.0 − 110.0	MS	13−MAY−21 17:55	210513−5
	Thorium	50.3	ug/L	50	ug/L	100.5	90.0 − 110.0	MS	13−MAY−21 17:55	210513−5
CCV06										
	Calcium	4630	ug/L	5000	ug/L	92.6	90.0 − 110.0	MS	13−MAY−21 18:22	210513−5
	Manganese	46.6	ug/L	50	ug/L	93.1	90.0 − 110.0	MS	13−MAY−21 18:22	210513−5
	Sodium	4520	ug/L	5000	ug/L	90.4	90.0 − 110.0	MS	13−MAY−21 18:22	210513−5
	Thorium	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	13−MAY−21 18:22	210513−5
CCV07										
	Calcium	4660	ug/L	5000	ug/L	93.3	90.0 − 110.0	MS	13−MAY−21 18:30	210513−5

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Manganese	47	ug/L	50	ug/L	94	90.0 − 110.0	MS	13−MAY−21 18:30	210513−5
	Sodium	4700	ug/L	5000	ug/L	93.9	90.0 − 110.0	MS	13−MAY−21 18:30	210513−5
	Thorium	50.5	ug/L	50	ug/L	101	90.0 − 110.0	MS	13−MAY−21 18:30	210513−5

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Aluminum	49.7	ug/L	50	ug/L	99.4	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Antimony	3.27	ug/L	3	ug/L	109.1	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Arsenic	4.81	ug/L	5	ug/L	96.3	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Barium	4.41	ug/L	4	ug/L	110.3	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Beryllium	.528	ug/L	.5	ug/L	105.6	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Cadmium	1.06	ug/L	1	ug/L	105.5	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Calcium	257	ug/L	200	ug/L	128.7	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Chromium	10.3	ug/L	10	ug/L	102.7	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Cobalt	1.05	ug/L	1	ug/L	104.5	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Copper	2.24	ug/L	2	ug/L	111.9	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Iron	104	ug/L	100	ug/L	103.6	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Lead	2.09	ug/L	2	ug/L	104.3	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Magnesium	32.5	ug/L	30	ug/L	108.2	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Manganese	4.97	ug/L	5	ug/L	99.5	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Molybdenum	1.12	ug/L	1	ug/L	112.2	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Nickel	2.17	ug/L	2	ug/L	108.6	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Potassium	320	ug/L	300	ug/L	106.5	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Selenium	5.3	ug/L	5	ug/L	105.9	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Silver	1.05	ug/L	1	ug/L	104.7	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Sodium	262	ug/L	250	ug/L	104.8	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Thallium	2.03	ug/L	2	ug/L	101.6	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Vanadium	19.6	ug/L	20	ug/L	98.1	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Zinc	21.8	ug/L	20	ug/L	108.9	80.0 − 120.0	MS	12−MAY−21 23:05	210512−1
	Uranium−235	.0015	ug/L	.0014	ug/L	107.1	80.0 − 120.0	MS	13−MAY−21 11:24	210513−2
	Uranium−238	.223	ug/L	.2	ug/L	111.5	80.0 − 120.0	MS	13−MAY−21 11:24	210513−2
	Calcium	263	ug/L	200	ug/L	131.6	80.0 − 120.0	MS	13−MAY−21 16:09	210513−5
	Manganese	5.15	ug/L	5	ug/L	103.1	80.0 − 120.0	MS	13−MAY−21 16:09	210513−5
	Sodium	263	ug/L	250	ug/L	105.2	80.0 − 120.0	MS	13−MAY−21 16:09	210513−5
	Thorium	2.17	ug/L	2	ug/L	108.3	80.0 − 120.0	MS	13−MAY−21 16:09	210513−5

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541203

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	12−MAY−21 23:02	210512−1
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	12−MAY−21 23:02	210512−1
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	12−MAY−21 23:02	210512−1
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	12−MAY−21 23:02	210512−1
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	12−MAY−21 23:02	210512−1
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	12−MAY−21 23:02	210512−1
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	13−MAY−21 11:23	210513−2
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	13−MAY−21 11:23	210513−2
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	13−MAY−21 16:07	210513−5
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	13−MAY−21 16:07	210513−5
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	13−MAY−21 16:07	210513−5
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	13−MAY−21 16:07	210513−5
CCB01										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	12−MAY−21 23:20	210512−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541203

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 23:20	210512−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	12−MAY−21 23:20	210512−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	12−MAY−21 23:20	210512−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Molybdenum	0.796	+/−1	J	0.2	1.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	12−MAY−21 23:20	210512−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	12−MAY−21 23:20	210512−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 23:20	210512−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 11:31	210513−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 11:31	210513−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 16:17	210513−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 16:17	210513−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 16:17	210513−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 16:17	210513−5
CCB02										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	12−MAY−21 23:30	210512−1

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541203

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	12−MAY−21 23:30	210512−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	12−MAY−21 23:30	210512−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	12−MAY−21 23:30	210512−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Molybdenum	0.648	+/−1	J	0.2	1.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	12−MAY−21 23:30	210512−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	12−MAY−21 23:30	210512−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	12−MAY−21 23:30	210512−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 11:49	210513−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 11:49	210513−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 16:54	210513−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 16:54	210513−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 16:54	210513−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 16:54	210513−5
CCB03										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 00:10	210512−1

SW846

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 541203

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	13−MAY−21 00:10	210512−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 00:10	210512−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	13−MAY−21 00:10	210512−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Molybdenum	0.303	+/−1	J	0.2	1.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	13−MAY−21 00:10	210512−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 00:10	210512−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 00:10	210512−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 12:08	210513−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 12:08	210513−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 17:10	210513−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 17:10	210513−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 17:10	210513−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 17:10	210513−5
CCB04										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	13−MAY−21 00:54	210512−1

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541203

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	13−MAY−21 00:54	210512−1
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 00:54	210512−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	13−MAY−21 00:54	210512−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	13−MAY−21 00:54	210512−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 00:54	210512−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 00:54	210512−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 12:29	210513−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 12:29	210513−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 17:34	210513−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 17:34	210513−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 17:34	210513−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 17:34	210513−5
CCB05										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	13−MAY−21 01:33	210512−1

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541203

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 01:33	210512−1
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	13−MAY−21 01:33	210512−1
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	13−MAY−21 01:33	210512−1
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 01:33	210512−1
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	13−MAY−21 01:33	210512−1
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	13−MAY−21 12:49	210513−2
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	13−MAY−21 12:49	210513−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 17:57	210513−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 17:57	210513−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 17:57	210513−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 17:57	210513−5
CCB06										
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 18:24	210513−5
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 18:24	210513−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 18:24	210513−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 18:24	210513−5
CCB07										
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	13−MAY−21 18:32	210513−5

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 541203

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	13−MAY−21 18:32	210513−5
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	13−MAY−21 18:32	210513−5
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	13−MAY−21 18:32	210513−5

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 541203

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204801994								
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.394	ug/L	+/−0.5	BJ	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−4−
Interference Check Sample

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	89300	ug/L	100000	ug/L	89.3	80.0 − 120.0	12−MAY−21 23:09	210512−1
	Antimony	0.133	ug/L					12−MAY−21 23:09	210512−1
	Arsenic	0.145	ug/L					12−MAY−21 23:09	210512−1
	Barium	2.81	ug/L					12−MAY−21 23:09	210512−1
	Beryllium	0.015	ug/L					12−MAY−21 23:09	210512−1
	Cadmium	0.928	ug/L					12−MAY−21 23:09	210512−1
	Calcium	90600	ug/L	100000	ug/L	90.6	80.0 − 120.0	12−MAY−21 23:09	210512−1
	Chromium	0.704	ug/L					12−MAY−21 23:09	210512−1
	Cobalt	0.466	ug/L					12−MAY−21 23:09	210512−1
	Copper	0.143	ug/L					12−MAY−21 23:09	210512−1
	Iron	84100	ug/L	100000	ug/L	84.1	80.0 − 120.0	12−MAY−21 23:09	210512−1
	Lead	0.187	ug/L					12−MAY−21 23:09	210512−1
	Magnesium	91500	ug/L	100000	ug/L	91.5	80.0 − 120.0	12−MAY−21 23:09	210512−1
	Manganese	5.95	ug/L					12−MAY−21 23:09	210512−1
	Molybdenum	1970	ug/L	2000	ug/L	98.7	80.0 − 120.0	12−MAY−21 23:09	210512−1
	Nickel	0.237	ug/L					12−MAY−21 23:09	210512−1
	Potassium	96000	ug/L	100000	ug/L	96	80.0 − 120.0	12−MAY−21 23:09	210512−1
	Selenium	0.24	ug/L					12−MAY−21 23:09	210512−1
	Silver	0.07	ug/L					12−MAY−21 23:09	210512−1
	Sodium	96300	ug/L	100000	ug/L	96.3	80.0 − 120.0	12−MAY−21 23:09	210512−1
	Thallium	0.101	ug/L					12−MAY−21 23:09	210512−1
	Vanadium	−0.426	ug/L					12−MAY−21 23:09	210512−1
	Zinc	1.14	ug/L					12−MAY−21 23:09	210512−1
ICSAB01									
	Aluminum	90900	ug/L	100000	ug/L	90.9	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Antimony	20.8	ug/L	20	ug/L	104	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Arsenic	20.5	ug/L	20	ug/L	103	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Barium	21.9	ug/L	22.35	ug/L	97.9	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Beryllium	18.8	ug/L	20	ug/L	94.1	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Cadmium	19.9	ug/L	20.72	ug/L	95.9	80.0 − 120.0	12−MAY−21 23:12	210512−1

METALS
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Interference Check Sample

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Calcium	91200	ug/L	100000	ug/L	91.2	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Chromium	20.4	ug/L	20	ug/L	102	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Cobalt	19.9	ug/L	20.65	ug/L	96.3	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Copper	20.4	ug/L	20	ug/L	102	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Iron	85700	ug/L	100000	ug/L	85.7	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Lead	18.6	ug/L	20	ug/L	93.2	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Magnesium	93000	ug/L	100000	ug/L	93	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Manganese	26.0	ug/L	25.72	ug/L	101	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Molybdenum	1960	ug/L	2000	ug/L	98.1	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Nickel	19.2	ug/L	20	ug/L	95.9	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Potassium	98400	ug/L	100000	ug/L	98.4	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Selenium	21.2	ug/L	20	ug/L	106	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Silver	18.4	ug/L	20	ug/L	92.2	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Sodium	98900	ug/L	100000	ug/L	98.9	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Thallium	18.1	ug/L	20	ug/L	90.4	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Vanadium	19.5	ug/L	20	ug/L	97.5	80.0 − 120.0	12−MAY−21 23:12	210512−1
	Zinc	23.1	ug/L	20	ug/L	115	80.0 − 120.0	12−MAY−21 23:12	210512−1

METALS
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Interference Check Sample

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0001	ug/L					13−MAY−21 11:26	210513−2
	Uranium−238	0.017	ug/L					13−MAY−21 11:26	210513−2
ICSAB01									
	Uranium−235	0.142	ug/L	.145	ug/L	97.7	80.0 − 120.0	13−MAY−21 11:28	210513−2
	Uranium−238	19.5	ug/L	19.86	ug/L	98	80.0 − 120.0	13−MAY−21 11:28	210513−2

METALS
−4−
Interference Check Sample

SDG No: 541203

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	91000	ug/L	100000	ug/L	91	80.0 − 120.0	13−MAY−21 16:11	210513−5
	Manganese	4.5	ug/L					13−MAY−21 16:11	210513−5
	Sodium	94300	ug/L	100000	ug/L	94.3	80.0 − 120.0	13−MAY−21 16:11	210513−5
	Thorium	2.12	ug/L					13−MAY−21 16:11	210513−5
ICSAB01									
	Calcium	90400	ug/L	100000	ug/L	90.4	80.0 − 120.0	13−MAY−21 16:13	210513−5
	Manganese	23.0	ug/L	25.72	ug/L	89.5	80.0 − 120.0	13−MAY−21 16:13	210513−5
	Sodium	96500	ug/L	100000	ug/L	96.5	80.0 − 120.0	13−MAY−21 16:13	210513−5
	Thorium	21.8	ug/L	20	ug/L	109	80.0 − 120.0	13−MAY−21 16:13	210513−5

METALS
−5a−

Matrix Spike Summary

SDG NO.	541203	**Client ID**	HB−13−04152021S
Contract:	DMAX00801	**Level:**	Low
Matrix:	GROUND WATER	**% Solids:**	
Sample ID:	541203003	**Spike ID:**	1204801996

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Nickel	ug/L	75−125	51.3		1.64	J	50.0	99.3		MS
Potassium	ug/L	75−125	4800		2680		2000	106		MS
Selenium	ug/L	75−125	48.1		2.00	U	50.0	96		MS
Silver	ug/L	75−125	51.4		0.300	U	50.0	103		MS
Sodium	ug/L		17900		15800		2000	107	N/A	MS
Aluminum	ug/L	75−125	2120		56.8		2000	103		MS
Antimony	ug/L	75−125	53.1		1.00	U	50.0	106		MS
Arsenic	ug/L	75−125	48.5		2.00	U	50.0	96.1		MS
Barium	ug/L	75−125	57.6		8.54		50.0	98.1		MS
Thallium	ug/L	75−125	49.6		0.600	U	50.0	99.1		MS
Thorium	ug/L	75−125	54.7		0.700	U	50.0	109		MS
Uranium−235	ug/L		6.66		6.45		0.360	56.9	N/A	MS
Uranium−238	ug/L		3210		3080		49.6	260	N/A	MS
Vanadium	ug/L	75−125	50.8		3.30	U	50.0	99.2		MS
Beryllium	ug/L	75−125	60.7		0.200	U	50.0	121		MS
Cadmium	ug/L	75−125	49.8		0.300	U	50.0	99.4		MS
Calcium	ug/L		19000		16500		2000	127	N/A	MS
Chromium	ug/L	75−125	49.1		3.00	U	50.0	97.5		MS
Cobalt	ug/L	75−125	51.1		1.46		50.0	99.3		MS
Copper	ug/L	75−125	60.7		11.3		50.0	98.9		MS
Iron	ug/L	75−125	1980		72.4	J	2000	95.1		MS
Lead	ug/L	75−125	51.1		0.500	U	50.0	102		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 541203 **Client ID:** HB−13−04152021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541203003 **Spike ID:** 1204801996

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Magnesium	ug/L	75−125	6810		4510		2000	115		MS
Manganese	ug/L	75−125	73.7		27.4		50.0	92.6		MS
Molybdenum	ug/L		395		338		50.0	115	N/A	MS
Zinc	ug/L	75−125	56.0		4.39	J	50.0	103		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 541203 **Client ID** HB−13−04152021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541203003 **Spike ID:** 1204801997

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−238	ug/L		3310		3080		49.6	478	N/A	MS
Vanadium	ug/L	75−125	51.4		3.30	U	50.0	100		MS
Zinc	ug/L	75−125	51.8		4.39	J	50.0	94.8		MS
Aluminum	ug/L	75−125	2030		56.8		2000	98.9		MS
Antimony	ug/L	75−125	53.3		1.00	U	50.0	107		MS
Arsenic	ug/L	75−125	48.6		2.00	U	50.0	96.3		MS
Barium	ug/L	75−125	57.7		8.54		50.0	98.4		MS
Beryllium	ug/L	75−125	59.6		0.200	U	50.0	119		MS
Cadmium	ug/L	75−125	50.5		0.300	U	50.0	101		MS
Calcium	ug/L		19100		16500		2000	131	N/A	MS
Chromium	ug/L	75−125	49.6		3.00	U	50.0	98.6		MS
Cobalt	ug/L	75−125	48.4		1.46		50.0	93.8		MS
Copper	ug/L	75−125	58.9		11.3		50.0	95.3		MS
Iron	ug/L	75−125	1920		72.4	J	2000	92.6		MS
Lead	ug/L	75−125	51.3		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	6730		4510		2000	111		MS
Manganese	ug/L	75−125	73.4		27.4		50.0	92		MS
Molybdenum	ug/L		408		338		50.0	141	N/A	MS
Nickel	ug/L	75−125	48.7		1.64	J	50.0	94.1		MS
Potassium	ug/L	75−125	4720		2680		2000	102		MS
Selenium	ug/L	75−125	47.9		2.00	U	50.0	95.5		MS
Silver	ug/L	75−125	50.8		0.300	U	50.0	102		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 541203 **Client ID**: HB−13−04152021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541203003 **Spike ID:** 1204801997

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Sodium	ug/L		18100		15800		2000	116	N/A	MS
Thallium	ug/L	75−125	49.8		0.600	U	50.0	99.4		MS
Thorium	ug/L	75−125	53.8		0.700	U	50.0	107		MS
Uranium−235	ug/L		6.83		6.45		0.360	106	N/A	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Summary

SDG NO. 541203 **Client ID** HB−13−04152021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541203004 **Spike ID:** 1204801999

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Vanadium	ug/L	75−125	50.4		3.30	U	50.0	98.8		MS
Zinc	ug/L	75−125	51.6		4.63	J	50.0	93.9		MS
Aluminum	ug/L	75−125	2070		19.3	U	2000	103		MS
Antimony	ug/L	75−125	52.4		1.00	U	50.0	105		MS
Arsenic	ug/L	75−125	48.4		2.00	U	50.0	96		MS
Barium	ug/L	75−125	56.8		8.43		50.0	96.8		MS
Beryllium	ug/L	75−125	60.7		0.200	U	50.0	121		MS
Cadmium	ug/L	75−125	49.4		0.300	U	50.0	98.6		MS
Calcium	ug/L		18500		16300		2000	110	N/A	MS
Chromium	ug/L	75−125	49.9		3.00	U	50.0	99.3		MS
Cobalt	ug/L	75−125	49.9		1.28		50.0	97.3		MS
Copper	ug/L	75−125	60.1		9.73		50.0	101		MS
Iron	ug/L	75−125	1940		33.0	U	2000	96.8		MS
Lead	ug/L	75−125	51.0		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	6760		4450		2000	115		MS
Manganese	ug/L	75−125	73.5		24.5		50.0	98		MS
Molybdenum	ug/L		395		339		50.0	111	N/A	MS
Nickel	ug/L	75−125	49.6		1.60	J	50.0	96		MS
Potassium	ug/L	75−125	4820		2580		2000	112		MS
Selenium	ug/L	75−125	47.5		2.00	U	50.0	94.9		MS
Silver	ug/L	75−125	51.0		0.300	U	50.0	102		MS
Sodium	ug/L		18300		15600		2000	135	N/A	MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 541203 **Client ID:** HB−13−04152021S

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541203004 **Spike ID:** 1204801999

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Thallium	ug/L	75−125	49.7		0.600	U	50.0	99.1		MS
Thorium	ug/L	75−125	52.7		0.700	U	50.0	105		MS
Uranium−235	ug/L		6.68		6.36		0.360	87.5	N/A	MS
Uranium−238	ug/L		3160		3020		49.6	281	N/A	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 541203 **Client ID** HB−13−04152021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541203004 **Spike ID:** 1204802000

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L		7.04		6.36		0.360	189	N/A	MS
Uranium−238	ug/L		3290		3020		49.6	540	N/A	MS
Vanadium	ug/L	75−125	50.1		3.30	U	50.0	98.2		MS
Zinc	ug/L	75−125	51.3		4.63	J	50.0	93.3		MS
Aluminum	ug/L	75−125	2030		19.3	U	2000	101		MS
Antimony	ug/L	75−125	52.4		1.00	U	50.0	105		MS
Arsenic	ug/L	75−125	48.7		2.00	U	50.0	96.6		MS
Barium	ug/L	75−125	56.5		8.43		50.0	96.1		MS
Beryllium	ug/L	75−125	59.1		0.200	U	50.0	118		MS
Cadmium	ug/L	75−125	50.7		0.300	U	50.0	101		MS
Calcium	ug/L		18400		16300		2000	105	N/A	MS
Chromium	ug/L	75−125	49.6		3.00	U	50.0	98.6		MS
Cobalt	ug/L	75−125	50.5		1.28		50.0	98.4		MS
Copper	ug/L	75−125	58.2		9.73		50.0	96.8		MS
Iron	ug/L	75−125	1950		33.0	U	2000	97.1		MS
Lead	ug/L	75−125	50.8		0.500	U	50.0	102		MS
Magnesium	ug/L	75−125	6480		4450		2000	102		MS
Manganese	ug/L	75−125	72.5		24.5		50.0	95.9		MS
Molybdenum	ug/L		398		339		50.0	117	N/A	MS
Nickel	ug/L	75−125	50.2		1.60	J	50.0	97.2		MS
Potassium	ug/L	75−125	4670		2580		2000	104		MS
Selenium	ug/L	75−125	49.3		2.00	U	50.0	98.5		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 541203 **Client ID** HB−13−04152021SD

Contract: DMAX00801 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 541203004 **Spike ID:** 1204802000

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Silver	ug/L	75−125	51.9		0.300	U	50.0	104		MS
Sodium	ug/L		17600		15600		2000	98.9	N/A	MS
Thallium	ug/L	75−125	50.7		0.600	U	50.0	101		MS
Thorium	ug/L	75−125	54.5		0.700	U	50.0	109		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
−6−
Duplicate Sample Summary

SDG No.: 541203 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HB−13−04152021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204801996 **Duplicate ID:** 1204801997 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2120		2030		4.24		MS
Antimony	ug/L	+/−20	53.1		53.3		.461		MS
Arsenic	ug/L	+/−20	48.5		48.6		.175		MS
Barium	ug/L	+/−20	57.6		57.7		.291		MS
Beryllium	ug/L	+/−20	60.7		59.6		1.83		MS
Cadmium	ug/L	+/−20	49.8		50.5		1.35		MS
Calcium	ug/L	+/−20	19000		19100		.39		MS
Chromium	ug/L	+/−20	49.1		49.6		1.12		MS
Cobalt	ug/L	+/−20	51.1		48.4		5.47		MS
Copper	ug/L	+/−20	60.7		58.9		3.05		MS
Iron	ug/L	+/−20	1980		1920		2.63		MS
Lead	ug/L	+/−20	51.1		51.3		.365		MS
Magnesium	ug/L	+/−20	6810		6730		1.04		MS
Manganese	ug/L	+/−20	73.7		73.4		.412		MS
Molybdenum	ug/L	+/−20	395		408		3.2		MS
Nickel	ug/L	+/−20	51.3		48.7		5.16		MS
Potassium	ug/L	+/−20	4800		4720		1.61		MS
Selenium	ug/L	+/−20	48.1		47.9		.517		MS
Silver	ug/L	+/−20	51.4		50.8		1.13		MS
Sodium	ug/L	+/−20	17900		18100		.973		MS
Thallium	ug/L	+/−20	49.6		49.8		.342		MS
Thorium	ug/L	+/−20	54.7		53.8		1.63		MS
Uranium−235	ug/L	+/−20	6.66		6.83		2.6		MS
Uranium−238	ug/L	+/−20	3210		3310		3.32		MS
Vanadium	ug/L	+/−20	50.8		51.4		1.02		MS
Zinc	ug/L	+/−20	56.0		51.8		7.85		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 541203 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HB−13−04152021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204801996 **Duplicate ID:** 1204801997 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

Metals
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Duplicate Sample Summary

SDG No.: 541203 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HB−13−04152021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204801999 **Duplicate ID:** 1204802000 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2070		2030		1.8		MS
Antimony	ug/L	+/−20	52.4		52.4		.0305		MS
Arsenic	ug/L	+/−20	48.4		48.7		.614		MS
Barium	ug/L	+/−20	56.8		56.5		.664		MS
Beryllium	ug/L	+/−20	60.7		59.1		2.82		MS
Cadmium	ug/L	+/−20	49.4		50.7		2.46		MS
Calcium	ug/L	+/−20	18500		18400		.464		MS
Chromium	ug/L	+/−20	49.9		49.6		.694		MS
Cobalt	ug/L	+/−20	49.9		50.5		1.05		MS
Copper	ug/L	+/−20	60.1		58.2		3.37		MS
Iron	ug/L	+/−20	1940		1950		.323		MS
Lead	ug/L	+/−20	51.0		50.8		.422		MS
Magnesium	ug/L	+/−20	6760		6480		4.16		MS
Manganese	ug/L	+/−20	73.5		72.5		1.46		MS
Molybdenum	ug/L	+/−20	395		398		.833		MS
Nickel	ug/L	+/−20	49.6		50.2		1.14		MS
Potassium	ug/L	+/−20	4820		4670		3.24		MS
Selenium	ug/L	+/−20	47.5		49.3		3.67		MS
Silver	ug/L	+/−20	51.0		51.9		1.74		MS
Sodium	ug/L	+/−20	18300		17600		4.04		MS
Thallium	ug/L	+/−20	49.7		50.7		2.11		MS
Thorium	ug/L	+/−20	52.7		54.5		3.36		MS
Uranium−235	ug/L	+/−20	6.68		7.04		5.32		MS
Uranium−238	ug/L	+/−20	3160		3290		3.99		MS
Vanadium	ug/L	+/−20	50.4		50.1		.615		MS
Zinc	ug/L	+/−20	51.6		51.3		.49		MS

Metals
−6−
Duplicate Sample Summary

SDG No.: 541203 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HB−13−04152021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204801999 **Duplicate ID:** 1204802000 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
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Laboratory Control Sample Summary

SDG NO. 541203

Contract: DMAX00801

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204801995								
	Aluminum	ug/L	2000	1990		99.5	80−120	MS
	Antimony	ug/L	50.0	49.7		99.4	80−120	MS
	Arsenic	ug/L	50.0	45.6		91.2	80−120	MS
	Barium	ug/L	50.0	47.7		95.4	80−120	MS
	Beryllium	ug/L	50.0	57.2		114	80−120	MS
	Cadmium	ug/L	50.0	48.2		96.5	80−120	MS
	Calcium	ug/L	2000	2130		106	80−120	MS
	Chromium	ug/L	50.0	47.8		95.6	80−120	MS
	Cobalt	ug/L	50.0	48.1		96.1	80−120	MS
	Copper	ug/L	50.0	47.8		95.7	80−120	MS
	Iron	ug/L	2000	1900		94.8	80−120	MS
	Lead	ug/L	50.0	50.7		101	80−120	MS
	Magnesium	ug/L	2000	2180		109	80−120	MS
	Manganese	ug/L	50.0	46.0		91.9	80−120	MS
	Molybdenum	ug/L	50.0	48.1		96.3	80−120	MS
	Nickel	ug/L	50.0	46.7		93.5	80−120	MS
	Potassium	ug/L	2000	2050		103	80−120	MS
	Selenium	ug/L	50.0	44.7		89.4	80−120	MS
	Silver	ug/L	50.0	50.2		100	80−120	MS
	Sodium	ug/L	2000	2160		108	80−120	MS
	Thallium	ug/L	50.0	48.9		97.8	80−120	MS
	Thorium	ug/L	50.0	53.0		106	80−120	MS
	Uranium−235	ug/L	0.360	0.370		103	80−120	MS
	Uranium−238	ug/L	49.6	49.9		100	80−120	MS
	Vanadium	ug/L	50.0	48.2		96.3	80−120	MS
	Zinc	ug/L	50.0	48.7		97.4	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 541203 **Client ID** HB−13−04152021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541203003 **Serial Dilution ID:** 1204801998

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	56.8		96.5	U	5.636			MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	8.54		8.84	J	3.479			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	16500		16000		2.956		20	MS
Chromium	3	U	15	U				MS
Cobalt	1.46		1.51	J	3.436			MS
Copper	11.3		11.5		1.928			MS
Iron	72.4	J	165	U	6.89			MS
Lead	.5	U	2.5	U				MS
Magnesium	4510		4260		5.569		20	MS
Manganese	27.4		27.8		1.558			MS
Molybdenum	338		332		1.798		20	MS
Nickel	1.64	J	3	U	2.681			MS
Potassium	2680		2540		5.34			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	15800		15100		4.6		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.129		.13	J	.775			MS
Uranium−238	61.5		60		2.394		20	MS
Vanadium	3.3	U	16.5	U				MS
Zinc	4.39	J	16.5	U	158.267			MS

METALS
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Serial Dilution Sample Summary

SDG NO. 541203 **Client ID** HB−13−04152021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541203003 **Serial Dilution ID:** 1204801998

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 541203 **Client ID** HB−13−04152021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541203004 **Serial Dilution ID:** 1204802001

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	2	U	10	U				MS
Barium	8.43		8.21	J	2.692			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	16300		15900		2.65		20	MS
Chromium	3	U	15	U				MS
Cobalt	1.28		1.5	U	3.583			MS
Copper	9.73		9.82	J	.884			MS
Iron	33	U	165	U				MS
Lead	.5	U	2.5	U				MS
Magnesium	4450		4200		5.661		20	MS
Manganese	24.5		25.1		2.272			MS
Molybdenum	339		331		2.46		20	MS
Nickel	1.6	J	3	U	2.561			MS
Potassium	2580		2540		1.47			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	15600		14900		4.245		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium−235	.127		.103	J	19.025			MS
Uranium−238	60.4		56.9		5.799		20	MS
Vanadium	3.3	U	16.5	U				MS
Zinc	4.63	J	16.5	U	128.432			MS

METALS
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Serial Dilution Sample Summary

SDG NO. 541203 **Client ID** HB−13−04152021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 541203004 **Serial Dilution ID:** 1204802001

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 541203 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2118255							
1204801994	MB for batch 2118255	MB	G	22−APR−21	50mL	50mL	
1204801995	LCS for batch 2118255	LCS	G	22−APR−21	50mL	50mL	
1204801996	HB−13−04152021S	MS	G	22−APR−21	50mL	50mL	
1204801999	HB−13−04152021S	MS	G	22−APR−21	50mL	50mL	
1204801997	HB−13−04152021SD	MSD	G	22−APR−21	50mL	50mL	
1204802000	HB−13−04152021SD	MSD	G	22−APR−21	50mL	50mL	
541203001	MW−1−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203002	MW−1−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203003	HB−13−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203004	HB−13−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203005	MW−SD01−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203006	MW−SD01−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203007	HA20−CMT−2D1−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203008	HA20−CMT−2D1−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203009	MW−BS54−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203010	MW−BS54−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203011	EQ Blank1−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203012	EQ Blank1−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203013	MW−BS01−04152021	SAMPLE	G	22−APR−21	50mL	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 541203 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
541203014	MW−BS01−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203015	GZW−11−2−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203016	GZW−11−2−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203021	GZW−10−2−04152021	SAMPLE	G	22−APR−21	50mL	50mL	
541203022	GZW−10−2−04152021	SAMPLE	G	22−APR−21	50mL	50mL	

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541203

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 12-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210512-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	22:47:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
S10	1	22:51:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
S100	1	22:54:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
ICV01	1	22:58:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
ICB01	1	23:02:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CRDL01	1	23:05:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
ICSA01	1	23:09:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
ICSAB01	1	23:12:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CCV01	1	23:16:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CCB01	1	23:20:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
LR01	1	23:23:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CCV02	1	23:27:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CCB02	1	23:30:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
1204801994	1	23:34:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
1204801995	1	23:38:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203001	1	23:41:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X				X	X
541203002	1	23:45:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X				X	X
541203003	1	23:49:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
1204801996	1	23:52:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
1204801997	1	23:56:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
ZZZZZZ	1	23:59:52																										
1204801998	5	00:03:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CCV03	1	00:07:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CCB03	1	00:10:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203004	1	00:14:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
1204801999	1	00:17:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
1204802000	1	00:21:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
ZZZZZZ	1	00:25:10																										
1204802001	5	00:28:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203005	1	00:32:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203006	1	00:36:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203007	1	00:39:37	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X				X	X
541203008	1	00:43:14	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X				X	X
541203009	1	00:46:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CCV04	1	00:50:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CCB04	1	00:54:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203010	1	00:57:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203011	1	01:01:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203012	1	01:04:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203013	1	01:08:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203014	1	01:12:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541203

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 12-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210512-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541203015	1	01:15:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203016	1	01:19:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
541203021	1	01:23:00	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X				X	X
541203022	1	01:26:37	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X				X	X
CCV05	1	01:30:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
CCB05	1	01:33:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541203

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 13-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210513-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	11:15:56																							X	X		
S10	1	11:17:42																							X	X		
S100	1	11:19:29																							X	X		
ICV01	1	11:21:15																							X	X		
ICB01	1	11:23:02																							X	X		
CRDL01	1	11:24:49																							X	X		
ICSA01	1	11:26:36																							X	X		
ICSAB01	1	11:28:24																							X	X		
CCV01	1	11:30:11																							X	X		
CCB01	1	11:31:58																							X	X		
1204801994	1	11:33:45																							X	X		
1204801995	1	11:35:32																							X	X		
541203001	1	11:37:19																							X	X		
541203002	1	11:39:06																							X	X		
ZZZZZZ	25	11:40:53																										
ZZZZZZ	25	11:42:39																										
ZZZZZZ	25	11:44:26																										
ZZZZZZ	125	11:46:12																										
CCV02	1	11:48:00																							X	X		
CCB02	1	11:49:48																							X	X		
541203003	50	11:52:23																							X	X		
1204801996	50	11:54:10																							X	X		
1204801997	50	11:55:57																							X	X		
1204801998	250	11:57:44																							X	X		
ZZZZZZ	25	11:59:31																										
ZZZZZZ	25	12:01:18																										
ZZZZZZ	25	12:03:04																										
ZZZZZZ	125	12:04:52																										
CCV03	1	12:06:40																							X	X		
CCB03	1	12:08:27																							X	X		
541203004	50	12:11:42																							X	X		
1204801999	50	12:13:29																							X	X		
1204802000	50	12:15:16																							X	X		
1204802001	250	12:17:03																							X	X		
541203005	1	12:18:50																							X	X		
541203006	1	12:20:37																							X	X		
541203007	1	12:22:24																							X	X		
541203008	1	12:24:11																							X	X		
541203009	1	12:25:57																							X	X		
CCV04	1	12:27:45																							X	X		
CCB04	1	12:29:32																							X	X		

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541203

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 13-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210513-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
541203010	1	12:31:20																							X	X		
541203011	1	12:33:07																							X	X		
541203012	1	12:34:53																							X	X		
541203013	1	12:36:40																							X	X		
541203014	1	12:38:27																							X	X		
541203015	1	12:40:14																							X	X		
541203016	1	12:42:00																							X	X		
541203021	1	12:43:47																							X	X		
541203022	1	12:45:34																							X	X		
CCV05	1	12:47:21																							X	X		
CCB05	1	12:49:09																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 541203

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 13-MAY-21

End Date: 13-MAY-21

Data File: 210513-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	15:59:08							X							X						X		X				
S10	1	16:01:07							X							X						X		X				
S100	1	16:03:06							X							X						X		X				
ICV01	1	16:05:06							X							X						X		X				
ICB01	1	16:07:05							X							X						X		X				
CRDL01	1	16:09:05							X							X						X		X				
ICSA01	1	16:11:04							X							X						X		X				
ICSAB01	1	16:13:03							X							X						X		X				
CCV01	1	16:15:03							X							X						X		X				
CCB01	1	16:17:02							X							X						X		X				
ZZZZZZ	1	16:19:02																										
ZZZZZZ	1	16:21:02																										
ZZZZZZ	1	16:23:01																										
ZZZZZZ	1	16:25:01																										
ZZZZZZ	1	16:27:01																										
ZZZZZZ	10	16:29:00																										
ZZZZZZ	10	16:31:00																										
ZZZZZZ	10	16:33:00																										
ZZZZZZ	50	16:35:00																										
CCV	1	16:37:01							X							X						X		X				
CCB	1	16:39:01							X							X						X		X				
ZZZZZZ	1	16:41:01																										
ZZZZZZ	1	16:43:01																										
ZZZZZZ	1	16:45:00																										
ZZZZZZ	1	16:47:00																										
ZZZZZZ	1	16:48:59																										
ZZZZZZ	1	16:50:59																										
CCV02	1	16:52:59							X							X						X		X				
CCB02	1	16:54:59							X							X						X		X				
1204801994	1	16:56:59																						X				
1204801995	1	16:58:59																						X				
541203001	1	17:00:59																						X				
ZZZZZZ	20	17:02:58																										
541203002	1	17:04:58																						X				
541203002	20	17:06:58																				X						
CCV03	1	17:08:59							X							X						X		X				
CCB03	1	17:10:59							X							X						X		X				
541203003	1	17:13:00																						X				
1204801996	1	17:14:59																						X				
1204801997	1	17:16:59																						X				
ZZZZZZ	1	17:18:58																										

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 541203

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 13-MAY-21 **End Date:** 13-MAY-21 **Data File:** 210513-5

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
1204801998	5	17:20:58																						X				
541203004	1	17:22:58																						X				
1204801999	1	17:24:58																						X				
1204802000	1	17:26:57																						X				
ZZZZZZ	1	17:28:57																										
1204802001	5	17:30:57																						X				
CCV04	1	17:32:57							X							X						X		X				
CCB04	1	17:34:57							X							X						X		X				
541203005	1	17:36:58																						X				
541203001	20	17:39:12																				X						
541203006	1	17:41:12																						X				
541203007	1	17:43:11																						X				
541203007	25	17:45:11														X						X						
541203008	1	17:47:11																						X				
541203008	25	17:49:11														X						X						
541203009	1	17:51:11																						X				
541203010	1	17:53:11																						X				
CCV05	1	17:55:12							X							X						X		X				
CCB05	1	17:57:11							X							X						X		X				
541203011	1	17:59:13																						X				
541203012	1	18:01:12																						X				
541203013	1	18:03:12																						X				
541203014	1	18:05:11																						X				
541203015	1	18:07:11																						X				
541203016	1	18:09:11																						X				
541203021	1	18:11:10																						X				
541203022	1	18:13:10																						X				
ZZZZZZ	25	18:18:13																										
ZZZZZZ	25	18:20:12																										
CCV06	1	18:22:13							X							X						X		X				
CCB06	1	18:24:13							X							X						X		X				
541203021	50	18:26:14							X							X												
541203022	50	18:28:14							X							X												
CCV07	1	18:30:15							X							X						X		X				
CCB07	1	18:32:15							X							X						X		X				

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
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Instrument Detection Limits

SDG NO. 541203

Contract: DMAX00801 **Lab Code: GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−MAR−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

METALS
−12−
Linear Ranges

SDG NO. 541203

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2118255**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204801995	ICP-MS spiking soluiton A	UI210317-A	.25	mL
LCS	1204801995	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204801996	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204801996	ICP-MS spiking solution B	UI210317-B	.25	mL
MS	1204801999	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MS	1204801999	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204801997	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204801997	ICP-MS spiking solution B	UI210317-B	.25	mL
MSD	1204802000	ICP-MS spiking soluiton A	UI210317-A	.25	mL
MSD	1204802000	ICP-MS spiking solution B	UI210317-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204801994 MB	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204801995 LCS	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203001	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203002	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203003	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204801998 SDILT (541203003)	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204801996 MS (541203003)	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204801997 MSD (541203003)	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203004	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204802001 SDILT (541203004)	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204801999 MS (541203004)	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
1204802000 MSD (541203004)	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203005	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203006	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203007	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203008	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203009	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203010	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203011	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203012	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203013	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203014	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203015	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203016	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203021	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2
541203022	22-APR-2021 08:55:49	Ground Water	50	04/22/21 14:55	50	1	<2

Comments:

Prep Logbook

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check

Reagent/Solvent Lot ID	Description	Amount
3267483	Concentrated Nitric Acid	1 mL
3279983	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 94 C
Temperature within limits (Y/N)?: y
Thermometer ID: 12411
Hot Block ID: 14
Digestion tube lot #: 2012333

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

August 12, 2021

Mr. Nathan Hunt
de maximis, inc.
2229 Main Street
Concord, Massachusetts 01742

Re: Nuclear Metals (NMI) Superfund Site RD/RA
Work Order: 550420

Dear Mr. Hunt:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on July 22, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1605.

Sincerely,

Delaney Stone

Delaney Stone for
Zachary Worsham
Project Manager

Purchase Order: Laboratory Services Agreement
Enclosures

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 550420

Table of Contents

Case Narrative

CASE NARRATIVE
for
de maximis, inc.
NMI SITE
SDG: 550420

August 12, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 22, 2021 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Additional Information

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
550420001	HA20-CMT-4D3-07152021
550420002	HA20-CMT-4D3-07152021
550420003	HA20-CMT-5D1-07152021
550420004	HA20-CMT-5D1-07152021
550420005	HA20-CMT-5D3-07152021
550420006	HA20-CMT-5D3-07152021
550420007	HA20-CMT-6D3-07162021
550420008	HA20-CMT-6D3-07162021
550420009	HA20-CMT-1D1-07162021
550420010	HA20-CMT-1D1-07162021
550420011	HA20-CMT-1D2-07162021
550420012	HA20-CMT-1D2-07162021
550420013	HA20-CMT-2D2-07192021
550420014	HA20-CMT-2D2-07192021
550420015	HA20-CMT-2D3-07192021
550420016	HA20-CMT-2D3-07192021
550420017	HA20-CMT-3D3-07192021
550420018	HA20-CMT-3D3-07192021
550420019	HA20-CMT-3D4-07202021
550420020	HA20-CMT-3D4-07202021
550420021	HA20-CMT-3T(OW)-07202021
550420022	HA20-CMT-3T(OW)-07202021
550420023	HA20-CMT-3T(OW)-07202021 DUP
550420024	HA20-CMT-3T(OW)-07202021 DUP

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Delaney Stone

Delaney Stone for
Zachary Worsham
Project Manager

Chain of Custody and Supporting Documentation

Page: 1 of 1
Project # 3252H
GEL Quote #: GELP18-1125

COC Number [1]:
PO Number:

GEL Laboratories LLC

Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

550420

GEL Work Order Number: **GEL Project Manager: Zach Worsham**

~~Client Name: de maximis, inc.~~ Phone # 978-793-7163
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

<-- Preservative Type (6): NI | NI | NI

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS)	Dissolved Metals (6020A ICP-MS) (Field Filtered)	U-235/U-238 plus Total U Calc.								Comments Note: extra sample is required for sample specific QC
HA20-CMT-4D3-07152021	7/15/21	1100	N	Y	AQ	U238		2	X	X	X								Total and Diss. ICP-MS List:
HA20-CMT-5D1-07152021	7/15/21	1220	N	Y	↓	U238		2	X	X	X								
HA20-CMT-5D3-07152021	7/15/21	1410	N	Y	↓	U238		2	X	X	X								Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
HA20-CMT-6D3-07162021	7/16/21	900	N	Y	AQ	U238		2	X	X	X								
HA20-CMT-1D1-07162021	7/16/21	1100	N	Y	AQ	U238		2	X	X	X								
HA20-CMT-1D2-07162021	7/16/21	1320	N	Y	AQ	U238		2	X	X	X								
HA20-CMT-2D2-07192021	7/19/21	1030	N	Y	AQ	U238		2	X	X	X								
HA20-CMT-2D3-07192021	7/19/21	1225	N	Y	AQ	U238		2	X	X	X								U-235/U-238 plus Total U Calc. for Total and Dissolved
HA20-CMT-3D3-07192021	7/19/21	1435	N	Y	AQ	U238		2	X	X	X								
						U238													

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 [signature]	7/20/21	730	1 [signature]	7/20/21	730
2 [signature]	7/20/21	1622	2 [signature]	7/20/21	1622
3 [signature]	7/21/22	1630	3 [signature]	7 22 21	915

TAT Requested: Normal: X Rush: ____ Specify: ______

Fax Results: [ ] Yes [X] No

Select Deliverable: [X] C of A [X] QC Summary [X] Level 5

Additional Remarks:

For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes [ ] No **Cooler Temp:** ____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic Hg= Mercury
Ba = Barium Se= Selenium
Cd = Cadmium Ag= Silver
Cr = Chromium MR= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: Samples analyzed via NaI, nothing detected
EW

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Page 2 of 2
Project # 3252H
GEL Quote #: GELP18-1125
COC Number [1]:
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
Chain of Custody and Analytical Request

GEL Work Order Number:
GEL Project Manager: Zach Worsham

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: de maximis, inc.
Project/Site Name: Nuclear Metals — Phone # 978-793-7163
Address: 200 Day Hill Road, Windsor CT — Fax #
Collected By: Various — Send Results To: nhunt@demaximis.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Total Metals (6020A ICP-MS)	Dissolved Metals (6020A ICP-MS) (Field Filtered)	U-235/U-238 plus Total U Calc.								Comments: Note: extra sample is required for sample specific QC
<-- Preservative Type (6)									NI	NI	NI								
HA20-CMT-3D4-07202021	7/20/21	1040	N	Y	GW	U238		2	X	X	X								Total and Diss. ICP-MS List:
HA20-CMT-3T(OW)-07202021	↓	1330	N	Y	GW	U238		2	X	X	X								
HA20-CMT-3T(OW)-07202021 DUP		1400	N	Y	GW	U238		2	X	X	X								Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, Vandium, Zinc
						U238													
						U238													
						U238													
						U238													
						U238													U-235/U-238 plus Total U Calc. for Total and Dissolved
						U238													
						U238													

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	[signature]	7/20/21	1526	1	[signature]	7/20/21	1526
2	[signature]	7/20/21	1622	2	[signature]	7/20/21	1622
3	[signature]	7/21/21	1630	3	[signature]	7 22 21	915

TAT Requested: Normal: X Rush: ____ Specify: ____
Fax Results: [ ] Yes [X] No
Select Deliverable: [X] C of A [X] QC Summary [X] Level 5
Additional Remarks:
For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes [ ] No Cooler Temp: ____°C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

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5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic — Hg= Mercury
Ba = Barium — Se= Selenium
Cd = Cadmium — Ag= Silver
Cr = Chromium — MR= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:
Samples analyzed via NaI, nothing detected.

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMAX			SDG/AR/COC/Work Order: 550420	
Received By: STACY BOONE			Date Received: JULY 22, 2021	
Carrier and Tracking Number			Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7743 2326 6374 1°c 7743 2326 6205 2°c 7743 2326 6569 2°c	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___	
B) Did the client designate the samples are to be received as radioactive?	✓		COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?	✓		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR4-21 TEMP: Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials MB Date 7/23/21 Page 1 of 1

GL-CHL-SR-001 Rev 7

Work Order Containers

Sample ID: **550420001**
Client Sample ID: **HA20−CMT−4D3−07152021**
Description: **Water**

Label: 550420001.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420001.01.01 **Type: New Undefined**

31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420002**
Client Sample ID: **HA20−CMT−4D3−07152021**
Description: **Dissolved Water**

Label: 550420002.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420002.01.01 **Type: New Undefined**

31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420003**
Client Sample ID: **HA20−CMT−5D1−07152021**
Description: **Water**

Label: 550420003.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to

Work Order Containers

Sample ID: **550420003**
Client Sample ID: **HA20−CMT−5D1−07152021**
Description: **Water**

Label: 550420003.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420003.01.01	**Type: New Undefined**	
31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420004**
Client Sample ID: **HA20−CMT−5D1−07152021**
Description: **Dissolved Water**

Label: 550420004.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420004.01.01	**Type: New Undefined**	
31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420005**
Client Sample ID: **HA20−CMT−5D3−07152021**
Description: **Water**

Label: 550420005.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **550420005**
Client Sample ID: **HA20−CMT−5D3−07152021**
Description: **Water**

Label: 550420005.01.01 **Type: New Undefined**

31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420006**
Client Sample ID: **HA20−CMT−5D3−07152021**
Description: **Dissolved Water**

Label: 550420006.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420006.01.01 **Type: New Undefined**

31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420007**
Client Sample ID: **HA20−CMT−6D3−07162021**
Description: **Water**

Label: 550420007.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420007.01.01 **Type: New Undefined**

31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **550420008**
Client Sample ID: **HA20−CMT−6D3−07162021**
Description: **Dissolved Water**

Label: 550420008.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420008.01.01 **Type: New Undefined**

31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420009**
Client Sample ID: **HA20−CMT−1D1−07162021**
Description: **Water**

Label: 550420009.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420009.01.01 **Type: New Undefined**

31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420010**
Client Sample ID: **HA20−CMT−1D1−07162021**
Description: **Dissolved Water**

Label: 550420010.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:01	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:01	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to

Work Order Containers

Sample ID: **550420010**
Client Sample ID: **HA20−CMT−1D1−07162021**
Description: **Dissolved Water**

Label: 550420010.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420010.01.01	**Type: New Undefined**	
31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420011**
Client Sample ID: **HA20−CMT−1D2−07162021**
Description: **Water**

Label: 550420011.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:01	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:01	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420011.01.01	**Type: New Undefined**	
31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420012**
Client Sample ID: **HA20−CMT−1D2−07162021**
Description: **Dissolved Water**

Label: 550420012.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:23:02	Stephen Michaels	Transfered custody to batch 2153914
28−JUL−21 12:23:02	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153914 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **550420012**
Client Sample ID: **HA20−CMT−1D2−07162021**
Description: **Dissolved Water**

Label: 550420012.01.01 **Type: New Undefined**

31−JUL−21 17:20:13	Paul Boyd	Transfered custody to batch 2153915
31−JUL−21 17:20:13	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420013**
Client Sample ID: **HA20−CMT−2D2−07192021**
Description: **Water**

Label: 550420013.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420013.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 550420013.01.02 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420014**
Client Sample ID: **HA20−CMT−2D2−07192021**
Description: **Dissolved Water**

Label: 550420014.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:31	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:31	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420014.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917

Work Order Containers

Sample ID: **550420014**
Client Sample ID: **HA20−CMT−2D2−07192021**
Description: **Dissolved Water**

Label: 550420014.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420015**
Client Sample ID: **HA20−CMT−2D3−07192021**
Description: **Water**

Label: 550420015.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420015.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 550420015.01.02 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420016**
Client Sample ID: **HA20−CMT−2D3−07192021**
Description: **Dissolved Water**

Label: 550420016.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420016.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **550420016**
Client Sample ID: **HA20−CMT−2D3−07192021**
Description: **Dissolved Water**

Label: 550420016.01.02 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420017**
Client Sample ID: **HA20−CMT−3D3−07192021**
Description: **Water**

Label: 550420017.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:31	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:31	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420017.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420018**
Client Sample ID: **HA20−CMT−3D3−07192021**
Description: **Dissolved Water**

Label: 550420018.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420018.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 550420018.01.02 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917

Work Order Containers

Sample ID: **550420018**
Client Sample ID: **HA20−CMT−3D3−07192021**
Description: **Dissolved Water**

Label: 550420018.01.02	**Type: New Undefined**	
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420019**
Client Sample ID: **HA20−CMT−3D4−07202021**
Description: **Water**

Label: 550420019.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 550420019.01.01	**Type: New Undefined**	
31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab
Label: 550420019.01.02	**Type: New Undefined**	
31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420020**
Client Sample ID: **HA20−CMT−3D4−07202021**
Description: **Dissolved Water**

Label: 550420020.01	**Type: Plastic 500 ml**	**Preservative: Nitric pH<2**
22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)
Label: 550420020.01.01	**Type: New Undefined**	
31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Work Order Containers

Sample ID: **550420020**
Client Sample ID: **HA20−CMT−3D4−07202021**
Description: **Dissolved Water**

Label: 550420020.01.02 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420021**
Client Sample ID: **HA20−CMT−3T(OW)−07202021**
Description: **Water**

Label: 550420021.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420021.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 550420021.01.02 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420022**
Client Sample ID: **HA20−CMT−3T(OW)−07202021**
Description: **Dissolved Water**

Label: 550420022.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420022.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917

Work Order Containers

Sample ID: **550420022**
Client Sample ID: **HA20−CMT−3T(OW)−07202021**
Description: **Dissolved Water**

Label: 550420022.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 550420022.01.02 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420023**
Client Sample ID: **HA20−CMT−3T(OW)−07202021 DUP**
Description: **Water**

Label: 550420023.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Label: 550420023.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 550420023.01.02 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Sample ID: **550420024**
Client Sample ID: **HA20−CMT−3T(OW)−07202021 DUP**
Description: **Dissolved Water**

Label: 550420024.01 **Type: Plastic 500 ml** **Preservative: Nitric pH<2**

22−JUL−21 15:22:09	Stacy Boone	Changed sample location from Barcode Generated to Main Cooler (Radioactive)
28−JUL−21 12:24:00	Stephen Michaels	Transfered custody to batch 2153916
28−JUL−21 12:24:00	Stephen Michaels	Changed sample location from Main Cooler (Radioactive) to Inorganic Prep
28−JUL−21 14:09:02	Stephen Michaels	Changed batch_id from 2153916 to
28−JUL−21 14:09:02	Stephen Michaels	Changed sample location from Inorganic Prep to Return Shelf Chemistry Samples
28−JUL−21 14:23:11	Antonina Martin	Changed sample location from Return Shelf Chemistry Samples to Main Cooler (Radioactive)

Work Order Containers

Sample ID: **550420024**
Client Sample ID: **HA20−CMT−3T(OW)−07202021 DUP**
Description: **Dissolved Water**

Label: 550420024.01.01 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Label: 550420024.01.02 **Type: New Undefined**

31−JUL−21 17:20:34	Paul Boyd	Transfered custody to batch 2153917
31−JUL−21 17:20:34	Paul Boyd	Changed sample location from Inorganic Prep to ICP/MS Lab

Data Package Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference.

For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Laboratory Certifications

List of current GEL Certifications as of 12 August 2021

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122021−35
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
de maximis, inc.
SDG #: 550420

<u>Product:</u> Determination of Metals by ICP-MS
<u>Analytical Method:</u> SW846 3005A/6020B
<u>Analytical Procedure:</u> GL-MA-E-014 REV# 34
<u>Analytical Batches:</u> 2153915 and 2153917

<u>Product:</u> Inorganic Calculations
<u>Analytical Method:</u> SW846 6020
<u>Analytical Procedure:</u> GL-GC-E-107 REV# 10
<u>Analytical Batch:</u> 2162505

<u>Preparation Method:</u> SW846 3005A
<u>Preparation Procedure:</u> GL-MA-E-006 REV# 14
<u>Preparation Batches:</u> 2153914 and 2153916

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
550420001	HA20-CMT-4D3-07152021
550420002	HA20-CMT-4D3-07152021
550420003	HA20-CMT-5D1-07152021
550420004	HA20-CMT-5D1-07152021
550420005	HA20-CMT-5D3-07152021
550420006	HA20-CMT-5D3-07152021
550420007	HA20-CMT-6D3-07162021
550420008	HA20-CMT-6D3-07162021
550420009	HA20-CMT-1D1-07162021
550420010	HA20-CMT-1D1-07162021
550420011	HA20-CMT-1D2-07162021
550420012	HA20-CMT-1D2-07162021
550420013	HA20-CMT-2D2-07192021
550420014	HA20-CMT-2D2-07192021
550420015	HA20-CMT-2D3-07192021
550420016	HA20-CMT-2D3-07192021
550420017	HA20-CMT-3D3-07192021
550420018	HA20-CMT-3D3-07192021
550420019	HA20-CMT-3D4-07202021
550420020	HA20-CMT-3D4-07202021
550420021	HA20-CMT-3T(OW)-07202021
550420022	HA20-CMT-3T(OW)-07202021
550420023	HA20-CMT-3T(OW)-07202021 DUP
550420024	HA20-CMT-3T(OW)-07202021 DUP
1204870187	Method Blank (MB)**ICP-MS**
1204870192	Method Blank (MB)**ICP-MS**
1204870188	Laboratory Control Sample (LCS)
1204870193	Laboratory Control Sample (LCS)
1204870191	550420001(HA20-CMT-4D3-07152021L) Serial Dilution (SD)
1204870196	550420013(HA20-CMT-2D2-07192021L) Serial Dilution (SD)

1204870189	550420001(HA20-CMT-4D3-07152021S) Matrix Spike (MS)
1204870194	550420013(HA20-CMT-2D2-07192021S) Matrix Spike (MS)
1204870190	550420001(HA20-CMT-4D3-07152021SD) Matrix Spike Duplicate (MSD)
1204870195	550420013(HA20-CMT-2D2-07192021SD) Matrix Spike Duplicate (MSD)

Samples 550420001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023 and 024 in this SDG were analyzed for metals on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements

The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of U235. Client sample concentrations were greater than two times the CRDL; therefore the data were not adversely affected. ICP-MS. The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of U235. Client sample concentrations were greater than two times the CRDL; therefore the data were not adversely affected. ICP-MS.

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 550420007 (HA20-CMT-6D3-07162021), 550420008 (HA20-CMT-6D3-07162021), 550420009 (HA20-CMT-1D1-07162021), 550420010 (HA20-CMT-1D1-07162021), 550420011 (HA20-CMT-1D2-07162021), 550420012 (HA20-CMT-1D2-07162021), 550420015 (HA20-CMT-2D3-07192021), 550420016 (HA20-CMT-2D3-07192021), 550420017 (HA20-CMT-3D3-07192021), 550420018 (HA20-CMT-3D3-07192021), 550420019 (HA20-CMT-3D4-07202021), 550420020 (HA20-CMT-3D4-07202021), 550420021 (HA20-CMT-3T(OW)-07202021), 550420022 (HA20-CMT-3T(OW)-07202021), 550420023 (HA20-CMT-3T(OW)-07202021 DUP) and 550420024 (HA20-CMT-3T(OW)-07202021 DUP)-ICP-MS were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	550420									
	007	**008**	**009**	**010**	**011**	**012**	**015**	**016**	**017**	**018**
Calcium	10X	10X	1X	1X	10X	10X	10X	1X	10X	10X
Manganese	1X	1X	1X	1X	1X	1X	10X	10X	10X	10X
Sodium	10X	10X	10X	10X	1X	1X	10X	1X	10X	10X

Analyte	550420					
	019	**020**	**021**	**022**	**023**	**024**
Calcium	1X	1X	10X	10X	10X	10X
Magnesium	1X	1X	1X	1X	10X	1X
Manganese	1X	1X	10X	10X	10X	10X
Sodium	10X	10X	10X	10X	10X	10X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMAX008 de maximis, inc.

Client SDG: 550420 GEL Work Order: 550420

The Qualifiers in this report are defined as follows:

*   Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

**   Indicates analyte is a surrogate compound.

J   Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

U   Analyzed for but undetected

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature:  **Name: Edmund Frampton**

Date: 16 AUG 2021 **Title: Team Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420001 **BASIS:** As Received **DATE COLLECTED** 15−JUL−21

CLIENT ID: HA20−CMT−4D3−07152021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	26.4	ug/L	J	19.3	50.0	50.0	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−36−0	Antimony	1.61	ug/L	J	1.00	3.00	3.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−38−2	Arsenic	4.27	ug/L	J	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−39−3	Barium	23.9	ug/L		0.670	4.00	4.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−70−2	Calcium	38300	ug/L		80.0	200	200	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−48−4	Cobalt	0.333	ug/L	J	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−50−8	Copper	0.323	ug/L	J	0.300	2.00	2.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7439−89−6	Iron	51.9	ug/L	J	33.0	100	100	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7439−95−4	Magnesium	16400	ug/L		10.0	30.0	30.0	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7439−96−5	Manganese	560	ug/L		1.00	5.00	5.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7439−98−7	Molybdenum	39.8	ug/L		0.200	1.00	1.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−09−7	Potassium	2820	ug/L		80.0	300	300	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−23−5	Sodium	43800	ug/L		80.0	250	250	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−61−1	Total Uranium	19.4	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.140	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:29	210731−1	2153915
7440−61−1	Uranium−238	19.2	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:29	210731−1	2153915
7440−62−2	Vanadium	3.55	ug/L	J	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:20	210731−2	2153915
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:20	210731−2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420002 **BASIS:** Filtered **DATE COLLECTED** 15−JUL−21

CLIENT ID: HA20−CMT−4D3−07152021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	25.6	ug/L	J	19.3	50.0	50.0	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−36−0	Antimony	1.58	ug/L	J	1.00	3.00	3.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−38−2	Arsenic	4.06	ug/L	J	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−39−3	Barium	24.2	ug/L		0.670	4.00	4.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−70−2	Calcium	38000	ug/L		80.0	200	200	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−48−4	Cobalt	0.311	ug/L	J	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−50−8	Copper	1.22	ug/L	J	0.300	2.00	2.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7439−89−6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7439−95−4	Magnesium	16100	ug/L		10.0	30.0	30.0	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7439−96−5	Manganese	533	ug/L		1.00	5.00	5.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7439−98−7	Molybdenum	39.8	ug/L		0.200	1.00	1.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−09−7	Potassium	2770	ug/L		80.0	300	300	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−23−5	Sodium	42900	ug/L		80.0	250	250	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−61−1	Total Uranium	19.9	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.146	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:38	210731−1	2153915
7440−61−1	Uranium−238	19.7	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:38	210731−1	2153915
7440−62−2	Vanadium	3.39	ug/L	J	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:38	210731−2	2153915
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:38	210731−2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420003 **BASIS:** As Received **DATE COLLECTED** 15-JUL-21

CLIENT ID: HA20-CMT-5D1-07152021 **LEVEL:** Low **DATE RECEIVED** 22-JUL-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	32.6	ug/L	J	19.3	50.0	50.0	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-39-3	Barium	25.6	ug/L		0.670	4.00	4.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-70-2	Calcium	29600	ug/L		80.0	200	200	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-48-4	Cobalt	0.610	ug/L	J	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7439-89-6	Iron	74.5	ug/L	J	33.0	100	100	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7439-95-4	Magnesium	7170	ug/L		10.0	30.0	30.0	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7439-96-5	Manganese	52.8	ug/L		1.00	5.00	5.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7439-98-7	Molybdenum	0.873	ug/L	J	0.200	1.00	1.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-02-0	Nickel	1.32	ug/L	J	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-09-7	Potassium	3870	ug/L		80.0	300	300	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-23-5	Sodium	30400	ug/L		80.0	250	250	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-61-1	Total Uranium	0.581	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:40	210731-1	2153915
7440-61-1	Uranium-238	0.581	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:40	210731-1	2153915
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:42	210731-2	2153915
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:42	210731-2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420004 **BASIS:** Filtered **DATE COLLECTED** 15-JUL-21

CLIENT ID: HA20-CMT-5D1-07152021 **LEVEL:** Low **DATE RECEIVED** 22-JUL-21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-38-2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-39-3	Barium	25.8	ug/L		0.670	4.00	4.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-70-2	Calcium	29700	ug/L		80.0	200	200	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-48-4	Cobalt	0.589	ug/L	J	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-50-8	Copper	0.599	ug/L	J	0.300	2.00	2.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7439-89-6	Iron	33.0	ug/L	U	33.0	100	100	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7439-95-4	Magnesium	7090	ug/L		10.0	30.0	30.0	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7439-96-5	Manganese	51.4	ug/L		1.00	5.00	5.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7439-98-7	Molybdenum	0.811	ug/L	J	0.200	1.00	1.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-02-0	Nickel	1.34	ug/L	J	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-09-7	Potassium	3870	ug/L		80.0	300	300	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-23-5	Sodium	30200	ug/L		80.0	250	250	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-61-1	Total Uranium	0.451	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117-96-1	Uranium-235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:45	210731-1	2153915
7440-61-1	Uranium-238	0.451	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:45	210731-1	2153915
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:52	210731-2	2153915
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:52	210731-2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420005 **BASIS:** As Received **DATE COLLECTED** 15−JUL−21

CLIENT ID: HA20−CMT−5D3−07152021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	52.5	ug/L		19.3	50.0	50.0	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−39−3	Barium	29.4	ug/L		0.670	4.00	4.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−70−2	Calcium	48200	ug/L		80.0	200	200	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7439−89−6	Iron	86.1	ug/L	J	33.0	100	100	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7439−95−4	Magnesium	8610	ug/L		10.0	30.0	30.0	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7439−96−5	Manganese	336	ug/L		1.00	5.00	5.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7439−98−7	Molybdenum	0.941	ug/L	J	0.200	1.00	1.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−09−7	Potassium	5580	ug/L		80.0	300	300	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−23−5	Sodium	10400	ug/L		80.0	250	250	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−61−1	Total Uranium	4.59	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0327	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:47	210731−1	2153915
7440−61−1	Uranium−238	4.55	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:47	210731−1	2153915
7440−62−2	Vanadium	4.39	ug/L	J	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:56	210731−2	2153915
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	07/31/21 23:56	210731−2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420006 **BASIS:** Filtered **DATE COLLECTED** 15−JUL−21

CLIENT ID: HA20−CMT−5D3−07152021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−39−3	Barium	28.8	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−70−2	Calcium	48300	ug/L		80.0	200	200	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−50−8	Copper	0.307	ug/L	J	0.300	2.00	2.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7439−89−6	Iron	33.7	ug/L	J	33.0	100	100	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7439−95−4	Magnesium	8680	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7439−96−5	Manganese	328	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7439−98−7	Molybdenum	0.890	ug/L	J	0.200	1.00	1.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−09−7	Potassium	5630	ug/L		80.0	300	300	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−23−5	Sodium	10500	ug/L		80.0	250	250	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−61−1	Total Uranium	4.66	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0342	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:48	210731−1	2153915
7440−61−1	Uranium−238	4.62	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:48	210731−1	2153915
7440−62−2	Vanadium	4.21	ug/L	J	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:00	210731−2	2153915
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:00	210731−2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420007 **BASIS:** As Received **DATE COLLECTED** 16-JUL-21

CLIENT ID: HA20-CMT-6D3-07162021 **LEVEL:** Low **DATE RECEIVED** 22-JUL-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	22.5	ug/L	J	19.3	50.0	50.0	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-38-2	Arsenic	3.94	ug/L	J	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-39-3	Barium	21.4	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-70-2	Calcium	52700	ug/L		800	2000	2000	10	MS	PRB	08/01/21 06:43	210731-3	2153915
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-48-4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-50-8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7439-89-6	Iron	175	ug/L		33.0	100	100	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7439-95-4	Magnesium	8810	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7439-96-5	Manganese	502	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7439-98-7	Molybdenum	11.3	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-09-7	Potassium	5020	ug/L		80.0	300	300	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-23-5	Sodium	53700	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:43	210731-3	2153915
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-61-1	Total Uranium	4.93	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117-96-1	Uranium-235	0.0341	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:50	210731-1	2153915
7440-61-1	Uranium-238	4.90	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:50	210731-1	2153915
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:03	210731-2	2153915
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:03	210731-2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420008 **BASIS:** Filtered **DATE COLLECTED** 16−JUL−21

CLIENT ID: HA20−CMT−6D3−07162021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	J	19.3	50.0	50.0	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−38−2	Arsenic	3.88	ug/L	J	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−39−3	Barium	21.2	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−70−2	Calcium	53800	ug/L		800	2000	2000	10	MS	PRB	08/01/21 06:46	210731−3	2153915
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7439−89−6	Iron	167	ug/L		33.0	100	100	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7439−95−4	Magnesium	8980	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7439−96−5	Manganese	486	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7439−98−7	Molybdenum	11.6	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−09−7	Potassium	5220	ug/L		80.0	300	300	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−23−5	Sodium	52800	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:46	210731−3	2153915
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−61−1	Total Uranium	5.11	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0355	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:52	210731−1	2153915
7440−61−1	Uranium−238	5.07	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:52	210731−1	2153915
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:07	210731−2	2153915
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:07	210731−2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420009 **BASIS:** As Received **DATE COLLECTED** 16−JUL−21

CLIENT ID: HA20−CMT−1D1−07162021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	35.5	ug/L	J	19.3	50.0	50.0	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−38−2	Arsenic	2.74	ug/L	J	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−39−3	Barium	19.0	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−70−2	Calcium	29000	ug/L		80.0	200	200	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7439−89−6	Iron	578	ug/L		33.0	100	100	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7439−95−4	Magnesium	5120	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7439−96−5	Manganese	704	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7439−98−7	Molybdenum	47.6	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−09−7	Potassium	8770	ug/L		80.0	300	300	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−23−5	Sodium	174000	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:50	210731−3	2153915
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−61−1	Total Uranium	1.10	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:54	210731−1	2153915
7440−61−1	Uranium−238	1.10	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:54	210731−1	2153915
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:11	210731−2	2153915
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:11	210731−2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420010 **BASIS:** Filtered **DATE COLLECTED** 16−JUL−21

CLIENT ID: HA20−CMT−1D1−07162021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	27.8	ug/L	J	19.3	50.0	50.0	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−38−2	Arsenic	2.60	ug/L	J	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−39−3	Barium	18.3	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−70−2	Calcium	28700	ug/L		80.0	200	200	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7439−89−6	Iron	488	ug/L		33.0	100	100	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7439−95−4	Magnesium	5110	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7439−96−5	Manganese	691	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7439−98−7	Molybdenum	46.2	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−09−7	Potassium	8710	ug/L		80.0	300	300	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−23−5	Sodium	170000	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:54	210731−3	2153915
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−61−1	Total Uranium	1.06	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0100	ug/L	U	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:56	210731−1	2153915
7440−61−1	Uranium−238	1.06	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:56	210731−1	2153915
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:14	210731−2	2153915
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:14	210731−2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420011 **BASIS:** As Received **DATE COLLECTED** 16−JUL−21

CLIENT ID: HA20−CMT−1D2−07162021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	46.0	ug/L	J	19.3	50.0	50.0	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−39−3	Barium	29.8	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−70−2	Calcium	55200	ug/L		800	2000	2000	10	MS	PRB	08/01/21 06:57	210731−3	2153915
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−48−4	Cobalt	1.03	ug/L		0.300	1.00	1.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−50−8	Copper	0.427	ug/L	J	0.300	2.00	2.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7439−89−6	Iron	737	ug/L		33.0	100	100	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7439−95−4	Magnesium	12000	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7439−96−5	Manganese	701	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7439−98−7	Molybdenum	3.55	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−02−0	Nickel	0.799	ug/L	J	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−09−7	Potassium	8370	ug/L		80.0	300	300	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−23−5	Sodium	20700	ug/L		80.0	250	250	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−61−1	Total Uranium	2.20	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0151	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:57	210731−1	2153915
7440−61−1	Uranium−238	2.19	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:57	210731−1	2153915
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:18	210731−2	2153915
7440−66−6	Zinc	5.91	ug/L	J	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:18	210731−2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420012 **BASIS:** Filtered **DATE COLLECTED** 16−JUL−21

CLIENT ID: HA20−CMT−1D2−07162021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−39−3	Barium	29.7	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−70−2	Calcium	55600	ug/L		800	2000	2000	10	MS	PRB	08/01/21 07:01	210731−3	2153915
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−48−4	Cobalt	0.973	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7439−89−6	Iron	667	ug/L		33.0	100	100	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7439−95−4	Magnesium	11900	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7439−96−5	Manganese	700	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7439−98−7	Molybdenum	3.51	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−02−0	Nickel	0.755	ug/L	J	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−09−7	Potassium	8370	ug/L		80.0	300	300	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−23−5	Sodium	20900	ug/L		80.0	250	250	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−61−1	Total Uranium	2.24	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0147	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 19:59	210731−1	2153915
7440−61−1	Uranium−238	2.23	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 19:59	210731−1	2153915
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:21	210731−2	2153915
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:21	210731−2	2153915

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153915	2153914	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420013 **BASIS:** As Received **DATE COLLECTED** 19-JUL-21

CLIENT ID: HA20-CMT-2D2-07192021 **LEVEL:** Low **DATE RECEIVED** 22-JUL-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-38-2	Arsenic	23.3	ug/L		2.00	5.00	5.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-39-3	Barium	30.0	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-70-2	Calcium	46100	ug/L		80.0	200	200	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-48-4	Cobalt	0.453	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-50-8	Copper	0.373	ug/L	J	0.300	2.00	2.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7439-89-6	Iron	169	ug/L		33.0	100	100	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7439-92-1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7439-95-4	Magnesium	11000	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7439-96-5	Manganese	949	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7439-98-7	Molybdenum	9.75	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-02-0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-09-7	Potassium	4600	ug/L		80.0	300	300	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-23-5	Sodium	23700	ug/L		80.0	250	250	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-61-1	Total Uranium	21.8	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117-96-1	Uranium-235	0.147	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:08	210731-1	2153917
7440-61-1	Uranium-238	21.6	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:08	210731-1	2153917
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:39	210731-2	2153917
7440-66-6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:39	210731-2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420014 **BASIS:** Filtered **DATE COLLECTED** 19−JUL−21

CLIENT ID: HA20−CMT−2D2−07192021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−38−2	Arsenic	22.7	ug/L		2.00	5.00	5.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−39−3	Barium	27.9	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−70−2	Calcium	45000	ug/L		80.0	200	200	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−48−4	Cobalt	0.413	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7439−89−6	Iron	146	ug/L		33.0	100	100	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7439−95−4	Magnesium	11000	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7439−96−5	Manganese	894	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7439−98−7	Molybdenum	8.60	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−09−7	Potassium	4470	ug/L		80.0	300	300	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−23−5	Sodium	23200	ug/L		80.0	250	250	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−61−1	Total Uranium	21.6	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.151	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:17	210731−1	2153917
7440−61−1	Uranium−238	21.5	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:17	210731−1	2153917
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:58	210731−2	2153917
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 00:58	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420015 **BASIS:** As Received **DATE COLLECTED** 19−JUL−21

CLIENT ID: HA20−CMT−2D3−07192021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−38−2	Arsenic	32.7	ug/L		2.00	5.00	5.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−39−3	Barium	17.8	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−70−2	Calcium	47500	ug/L		800	2000	2000	10	MS	PRB	08/01/21 05:51	210731−3	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−48−4	Cobalt	0.553	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−50−8	Copper	0.361	ug/L	J	0.300	2.00	2.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7439−89−6	Iron	440	ug/L		33.0	100	100	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7439−95−4	Magnesium	11000	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7439−96−5	Manganese	1600	ug/L		10.0	50.0	50.0	10	MS	PRB	08/01/21 05:51	210731−3	2153917
7439−98−7	Molybdenum	12.8	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−09−7	Potassium	4750	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−23−5	Sodium	48700	ug/L		800	2500	2500	10	MS	PRB	08/01/21 05:51	210731−3	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−61−1	Total Uranium	12.7	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0935	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:19	210731−1	2153917
7440−61−1	Uranium−238	12.6	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:19	210731−1	2153917
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:01	210731−2	2153917
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:01	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420016 **BASIS:** Filtered **DATE COLLECTED** 19−JUL−21

CLIENT ID: HA20−CMT−2D3−07192021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	19.3	ug/L	U	19.3	50.0	50.0	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−38−2	Arsenic	31.1	ug/L		2.00	5.00	5.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−39−3	Barium	17.5	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−70−2	Calcium	48700	ug/L		80.0	200	200	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−48−4	Cobalt	0.530	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−50−8	Copper	0.300	ug/L	U	0.300	2.00	2.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7439−89−6	Iron	389	ug/L		33.0	100	100	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7439−95−4	Magnesium	10400	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7439−96−5	Manganese	1510	ug/L		10.0	50.0	50.0	10	MS	PRB	08/01/21 05:55	210731−3	2153917
7439−98−7	Molybdenum	11.9	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−09−7	Potassium	4550	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−23−5	Sodium	47500	ug/L		80.0	250	250	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−61−1	Total Uranium	12.1	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0845	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:24	210731−1	2153917
7440−61−1	Uranium−238	12.1	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:24	210731−1	2153917
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:12	210731−2	2153917
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:12	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420017 **BASIS:** As Received **DATE COLLECTED** 19-JUL-21

CLIENT ID: HA20-CMT-3D3-07192021 **LEVEL:** Low **DATE RECEIVED** 22-JUL-21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	206	ug/L		19.3	50.0	50.0	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-36-0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-38-2	Arsenic	5.91	ug/L		2.00	5.00	5.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-39-3	Barium	26.6	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-41-7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-43-9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-70-2	Calcium	155000	ug/L		800	2000	2000	10	MS	PRB	08/01/21 06:06	210731-3	2153917
7440-47-3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-48-4	Cobalt	1.82	ug/L		0.300	1.00	1.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-50-8	Copper	3.85	ug/L		0.300	2.00	2.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7439-89-6	Iron	1970	ug/L		33.0	100	100	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7439-92-1	Lead	0.868	ug/L	J	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7439-95-4	Magnesium	34900	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7439-96-5	Manganese	4090	ug/L		10.0	50.0	50.0	10	MS	PRB	08/01/21 06:06	210731-3	2153917
7439-98-7	Molybdenum	19.7	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-02-0	Nickel	1.64	ug/L	J	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-09-7	Potassium	8770	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7782-49-2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-22-4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-23-5	Sodium	414000	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:06	210731-3	2153917
7440-28-0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-29-1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-61-1	Total Uranium	71.0	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117-96-1	Uranium-235	0.494	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:26	210731-1	2153917
7440-61-1	Uranium-238	70.5	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:26	210731-1	2153917
7440-62-2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:16	210731-2	2153917
7440-66-6	Zinc	5.47	ug/L	J	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:16	210731-2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420018 **BASIS:** Filtered **DATE COLLECTED** 19−JUL−21

CLIENT ID: HA20−CMT−3D3−07192021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	67.9	ug/L		19.3	50.0	50.0	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−38−2	Arsenic	5.45	ug/L		2.00	5.00	5.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−39−3	Barium	26.9	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−70−2	Calcium	165000	ug/L		800	2000	2000	10	MS	PRB	08/01/21 06:09	210731−3	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−48−4	Cobalt	1.41	ug/L		0.300	1.00	1.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−50−8	Copper	1.11	ug/L	J	0.300	2.00	2.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7439−89−6	Iron	1510	ug/L		33.0	100	100	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7439−95−4	Magnesium	36900	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7439−96−5	Manganese	3900	ug/L		10.0	50.0	50.0	10	MS	PRB	08/01/21 06:09	210731−3	2153917
7439−98−7	Molybdenum	19.7	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−02−0	Nickel	1.18	ug/L	J	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−09−7	Potassium	8970	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−23−5	Sodium	412000	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:09	210731−3	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−61−1	Total Uranium	77.4	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.554	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:28	210731−1	2153917
7440−61−1	Uranium−238	76.9	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:28	210731−1	2153917
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:19	210731−2	2153917
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:19	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420019 **BASIS:** As Received **DATE COLLECTED** 20−JUL−21

CLIENT ID: HA20−CMT−3D4−07202021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	100	ug/L		19.3	50.0	50.0	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−38−2	Arsenic	4.54	ug/L	J	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−39−3	Barium	14.0	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−70−2	Calcium	24800	ug/L		80.0	200	200	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−48−4	Cobalt	0.349	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−50−8	Copper	0.621	ug/L	J	0.300	2.00	2.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7439−89−6	Iron	422	ug/L		33.0	100	100	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7439−95−4	Magnesium	5620	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7439−96−5	Manganese	482	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7439−98−7	Molybdenum	279	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−02−0	Nickel	0.632	ug/L	J	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−09−7	Potassium	5260	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−23−5	Sodium	99100	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:13	210731−3	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−61−1	Total Uranium	9.25	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0646	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:29	210731−1	2153917
7440−61−1	Uranium−238	9.19	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:29	210731−1	2153917
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:23	210731−2	2153917
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:23	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420020 **BASIS:** Filtered **DATE COLLECTED** 20−JUL−21

CLIENT ID: HA20−CMT−3D4−07202021 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	30.0	ug/L	J	19.3	50.0	50.0	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−38−2	Arsenic	4.11	ug/L	J	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−39−3	Barium	14.0	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−70−2	Calcium	25300	ug/L		80.0	200	200	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−48−4	Cobalt	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−50−8	Copper	0.332	ug/L	J	0.300	2.00	2.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7439−89−6	Iron	170	ug/L		33.0	100	100	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7439−95−4	Magnesium	5770	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7439−96−5	Manganese	475	ug/L		1.00	5.00	5.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7439−98−7	Molybdenum	276	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−02−0	Nickel	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−09−7	Potassium	5320	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−23−5	Sodium	98200	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:16	210731−3	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−61−1	Total Uranium	10.4	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0751	ug/L		0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:31	210731−1	2153917
7440−61−1	Uranium−238	10.4	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:31	210731−1	2153917
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:26	210731−2	2153917
7440−66−6	Zinc	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:26	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420021 **BASIS:** As Received **DATE COLLECTED** 20−JUL−21

CLIENT ID: HA20−CMT−3T(OW)−07202 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	293	ug/L		19.3	50.0	50.0	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−39−3	Barium	178	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−70−2	Calcium	170000	ug/L		800	2000	2000	10	MS	PRB	08/01/21 06:20	210731−3	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−48−4	Cobalt	0.753	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−50−8	Copper	2.43	ug/L		0.300	2.00	2.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7439−89−6	Iron	508	ug/L		33.0	100	100	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7439−92−1	Lead	0.876	ug/L	J	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7439−95−4	Magnesium	45900	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7439−96−5	Manganese	1120	ug/L		10.0	50.0	50.0	10	MS	PRB	08/01/21 06:20	210731−3	2153917
7439−98−7	Molybdenum	16.1	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−02−0	Nickel	1.70	ug/L	J	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−09−7	Potassium	19000	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−23−5	Sodium	93100	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:20	210731−3	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−61−1	Total Uranium	4.30	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0261	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:33	210731−1	2153917
7440−61−1	Uranium−238	4.27	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:33	210731−1	2153917
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:30	210731−2	2153917
7440−66−6	Zinc	14.9	ug/L	J	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:30	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420022 **BASIS:** Filtered **DATE COLLECTED** 20−JUL−21

CLIENT ID: HA20−CMT−3T(OW)−07202 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	45.9	ug/L	J	19.3	50.0	50.0	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−39−3	Barium	172	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−70−2	Calcium	178000	ug/L		800	2000	2000	10	MS	PRB	08/01/21 06:24	210731−3	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−48−4	Cobalt	0.431	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−50−8	Copper	1.40	ug/L	J	0.300	2.00	2.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7439−89−6	Iron	91.3	ug/L	J	33.0	100	100	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7439−95−4	Magnesium	48900	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7439−96−5	Manganese	1100	ug/L		10.0	50.0	50.0	10	MS	PRB	08/01/21 06:24	210731−3	2153917
7439−98−7	Molybdenum	18.2	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−02−0	Nickel	1.55	ug/L	J	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−09−7	Potassium	19400	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−23−5	Sodium	96500	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:24	210731−3	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−61−1	Total Uranium	4.72	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0297	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:35	210731−1	2153917
7440−61−1	Uranium−238	4.69	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:35	210731−1	2153917
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:34	210731−2	2153917
7440−66−6	Zinc	13.2	ug/L	J	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:34	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420023 **BASIS:** As Received **DATE COLLECTED** 20−JUL−21

CLIENT ID: HA20−CMT−3T(OW)−07202 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	223	ug/L		19.3	50.0	50.0	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−39−3	Barium	177	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−70−2	Calcium	178000	ug/L		800	2000	2000	10	MS	PRB	08/01/21 06:27	210731−3	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−48−4	Cobalt	0.641	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−50−8	Copper	2.22	ug/L		0.300	2.00	2.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7439−89−6	Iron	388	ug/L		33.0	100	100	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7439−92−1	Lead	0.629	ug/L	J	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7439−95−4	Magnesium	49500	ug/L		100	300	300	10	MS	PRB	08/01/21 06:27	210731−3	2153917
7439−96−5	Manganese	1100	ug/L		10.0	50.0	50.0	10	MS	PRB	08/01/21 06:27	210731−3	2153917
7439−98−7	Molybdenum	16.2	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−02−0	Nickel	1.86	ug/L	J	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−09−7	Potassium	19600	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−23−5	Sodium	95000	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:27	210731−3	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−61−1	Total Uranium	4.73	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0341	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:36	210731−1	2153917
7440−61−1	Uranium−238	4.69	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:36	210731−1	2153917
7440−62−2	Vanadium	3.35	ug/L	J	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:37	210731−2	2153917
7440−66−6	Zinc	15.2	ug/L	J	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:37	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 550420 **CONTRACT:** DMAX00801 **METHOD TYPE:** SW846

SAMPLE ID: 550420024 **BASIS:** Filtered **DATE COLLECTED** 20−JUL−21

CLIENT ID: HA20−CMT−3T(OW)−07202 **LEVEL:** Low **DATE RECEIVED** 22−JUL−21

MATRIX: WG **Dissolved Metals** **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429−90−5	Aluminum	49.1	ug/L	J	19.3	50.0	50.0	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−36−0	Antimony	1.00	ug/L	U	1.00	3.00	3.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−38−2	Arsenic	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−39−3	Barium	174	ug/L		0.670	4.00	4.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−41−7	Beryllium	0.200	ug/L	U	0.200	0.500	0.500	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−43−9	Cadmium	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−70−2	Calcium	178000	ug/L		800	2000	2000	10	MS	PRB	08/01/21 06:31	210731−3	2153917
7440−47−3	Chromium	3.00	ug/L	U	3.00	10.0	10.0	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−48−4	Cobalt	0.446	ug/L	J	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−50−8	Copper	1.25	ug/L	J	0.300	2.00	2.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7439−89−6	Iron	92.3	ug/L	J	33.0	100	100	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7439−92−1	Lead	0.500	ug/L	U	0.500	2.00	2.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7439−95−4	Magnesium	49800	ug/L		10.0	30.0	30.0	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7439−96−5	Manganese	1120	ug/L		10.0	50.0	50.0	10	MS	PRB	08/01/21 06:31	210731−3	2153917
7439−98−7	Molybdenum	18.1	ug/L		0.200	1.00	1.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−02−0	Nickel	1.56	ug/L	J	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−09−7	Potassium	19300	ug/L		80.0	300	300	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7782−49−2	Selenium	2.00	ug/L	U	2.00	5.00	5.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−22−4	Silver	0.300	ug/L	U	0.300	1.00	1.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−23−5	Sodium	95300	ug/L		800	2500	2500	10	MS	PRB	08/01/21 06:31	210731−3	2153917
7440−28−0	Thallium	0.600	ug/L	U	0.600	2.00	2.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−29−1	Thorium	0.700	ug/L	U	0.700	2.00	2.00	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−61−1	Total Uranium	4.60	ug/L		0.0670	0.200	0.200			BAJ	08/14/21 13:43		2162505
15117−96−1	Uranium−235	0.0299	ug/L	J	0.0100	0.0700	0.0700	1	MS	PRB	07/31/21 20:38	210731−1	2153917
7440−61−1	Uranium−238	4.57	ug/L		0.0670	0.200	0.200	1	MS	PRB	07/31/21 20:38	210731−1	2153917
7440−62−2	Vanadium	3.30	ug/L	U	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:41	210731−2	2153917
7440−66−6	Zinc	14.1	ug/L	J	3.30	20.0	20.0	1	MS	PRB	08/01/21 01:41	210731−2	2153917

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2153917	2153916	SW846 3005A	50	mL	50	mL	07/29/21	SM1

***Analytical Methods:**

MS **SW846 3005A/6020B**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Uranium−235	0.36	ug/L	0.36	ug/L	99.2	90.0 − 110.0	MS	31−JUL−21 18:55	210731−1
	Uranium−238	50.4	ug/L	49.64	ug/L	101.4	90.0 − 110.0	MS	31−JUL−21 18:55	210731−1
	Aluminum	5170	ug/L	5050	ug/L	102.5	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Antimony	52.3	ug/L	50	ug/L	104.6	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Arsenic	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Barium	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Beryllium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Cadmium	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Calcium	5170	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Chromium	51.1	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Cobalt	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Copper	53.9	ug/L	50	ug/L	107.9	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Iron	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Lead	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Magnesium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Manganese	50.8	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Molybdenum	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Nickel	52	ug/L	50	ug/L	103.9	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Potassium	5210	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Selenium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Silver	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Sodium	5190	ug/L	5000	ug/L	103.9	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Thallium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Thorium	52	ug/L	50	ug/L	104	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Vanadium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Zinc	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	31−JUL−21 22:00	210731−2
	Calcium	4910	ug/L	5000	ug/L	98.1	90.0 − 110.0	MS	01−AUG−21 04:12	210731−3
	Magnesium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	MS	01−AUG−21 04:12	210731−3
	Manganese	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	01−AUG−21 04:12	210731−3
	Sodium	5100	ug/L	5000	ug/L	102	90.0 − 110.0	MS	01−AUG−21 04:12	210731−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV01										
	Uranium−235	0.37	ug/L	0.36	ug/L	101.8	90.0 − 110.0	MS	31−JUL−21 19:04	210731−1
	Uranium−238	51.1	ug/L	49.64	ug/L	102.9	90.0 − 110.0	MS	31−JUL−21 19:04	210731−1
	Aluminum	5200	ug/L	5050	ug/L	102.9	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Antimony	51.9	ug/L	50	ug/L	103.8	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Arsenic	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Barium	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Beryllium	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Cadmium	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Calcium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Chromium	52.1	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Cobalt	52.8	ug/L	50	ug/L	105.6	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Copper	54.2	ug/L	50	ug/L	108.4	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Iron	5230	ug/L	5000	ug/L	104.5	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Lead	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Magnesium	5140	ug/L	5000	ug/L	102.8	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Manganese	52.4	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Molybdenum	53.2	ug/L	50	ug/L	106.4	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Nickel	52.8	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Potassium	5250	ug/L	5000	ug/L	105	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Selenium	51.3	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Silver	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Sodium	5270	ug/L	5000	ug/L	105.3	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Thallium	48.2	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Thorium	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Vanadium	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Zinc	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	31−JUL−21 22:18	210731−2
	Calcium	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	MS	01−AUG−21 04:30	210731−3
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 − 110.0	MS	01−AUG−21 04:30	210731−3
	Manganese	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	01−AUG−21 04:30	210731−3
	Sodium	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	01−AUG−21 04:30	210731−3

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV02										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.9	90.0 − 110.0	MS	31−JUL−21 19:22	210731−1
	Uranium−238	50.7	ug/L	49.64	ug/L	102	90.0 − 110.0	MS	31−JUL−21 19:22	210731−1
	Aluminum	5240	ug/L	5050	ug/L	103.7	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Antimony	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Arsenic	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Barium	50.5	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Beryllium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Cadmium	50.1	ug/L	50	ug/L	100.2	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Calcium	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Chromium	51.3	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Cobalt	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Copper	53.6	ug/L	50	ug/L	107.2	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Lead	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Magnesium	5120	ug/L	5000	ug/L	102.4	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Manganese	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Molybdenum	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Nickel	52.5	ug/L	50	ug/L	105.1	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Potassium	5200	ug/L	5000	ug/L	104	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Selenium	50.7	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Silver	50	ug/L	50	ug/L	100.1	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Sodium	5250	ug/L	5000	ug/L	105	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Thallium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Thorium	56.7	ug/L	50	ug/L	113.4	90.0 − 110.0 *	MS	31−JUL−21 22:29	210731−2
	Vanadium	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Zinc	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	31−JUL−21 22:29	210731−2
	Calcium	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	01−AUG−21 04:41	210731−3
	Magnesium	5180	ug/L	5000	ug/L	103.5	90.0 − 110.0	MS	01−AUG−21 04:41	210731−3
	Manganese	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	01−AUG−21 04:41	210731−3
	Sodium	5130	ug/L	5000	ug/L	102.7	90.0 − 110.0	MS	01−AUG−21 04:41	210731−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV03										
	Uranium−235	0.37	ug/L	0.36	ug/L	102.6	90.0 − 110.0	MS	31−JUL−21 19:41	210731−1
	Uranium−238	50.9	ug/L	49.64	ug/L	102.6	90.0 − 110.0	MS	31−JUL−21 19:41	210731−1
	Aluminum	5150	ug/L	5050	ug/L	102	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Antimony	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Arsenic	49.4	ug/L	50	ug/L	98.7	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Barium	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Beryllium	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Cadmium	49	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Chromium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Cobalt	51.3	ug/L	50	ug/L	102.6	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Copper	53.1	ug/L	50	ug/L	106.3	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Iron	5050	ug/L	5000	ug/L	101	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Lead	51.6	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Magnesium	5160	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Manganese	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Molybdenum	48.9	ug/L	50	ug/L	97.8	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Nickel	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Potassium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Selenium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Silver	49.1	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Sodium	5340	ug/L	5000	ug/L	106.8	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Thallium	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Thorium	52.4	ug/L	50	ug/L	104.9	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Vanadium	51.5	ug/L	50	ug/L	103	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Zinc	49.9	ug/L	50	ug/L	99.7	90.0 − 110.0	MS	31−JUL−21 23:05	210731−2
	Calcium	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	MS	01−AUG−21 05:21	210731−3
	Magnesium	5210	ug/L	5000	ug/L	104.3	90.0 − 110.0	MS	01−AUG−21 05:21	210731−3
	Manganese	52.6	ug/L	50	ug/L	105.2	90.0 − 110.0	MS	01−AUG−21 05:21	210731−3
	Sodium	5240	ug/L	5000	ug/L	104.7	90.0 − 110.0	MS	01−AUG−21 05:21	210731−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV04										
	Uranium−235	0.37	ug/L	0.36	ug/L	103.1	90.0 − 110.0	MS	31−JUL−21 20:01	210731−1
	Uranium−238	51.2	ug/L	49.64	ug/L	103	90.0 − 110.0	MS	31−JUL−21 20:01	210731−1
	Aluminum	5220	ug/L	5050	ug/L	103.4	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Antimony	53.2	ug/L	50	ug/L	106.5	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Arsenic	49.2	ug/L	50	ug/L	98.3	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Barium	50.2	ug/L	50	ug/L	100.4	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Beryllium	51.7	ug/L	50	ug/L	103.3	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Cadmium	50.3	ug/L	50	ug/L	100.6	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Chromium	51.6	ug/L	50	ug/L	103.1	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Cobalt	50.4	ug/L	50	ug/L	100.8	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Copper	52.9	ug/L	50	ug/L	105.9	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Iron	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Lead	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Magnesium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Manganese	51	ug/L	50	ug/L	102.1	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Molybdenum	49.8	ug/L	50	ug/L	99.6	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Nickel	50.6	ug/L	50	ug/L	101.1	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Potassium	5080	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Selenium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Silver	49.7	ug/L	50	ug/L	99.3	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Sodium	5330	ug/L	5000	ug/L	106.7	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Thallium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Thorium	52.8	ug/L	50	ug/L	105.7	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Vanadium	51.1	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Zinc	49	ug/L	50	ug/L	98.1	90.0 − 110.0	MS	31−JUL−21 23:45	210731−2
	Calcium	4930	ug/L	5000	ug/L	98.6	90.0 − 110.0	MS	01−AUG−21 05:58	210731−3
	Magnesium	5150	ug/L	5000	ug/L	103.1	90.0 − 110.0	MS	01−AUG−21 05:58	210731−3
	Manganese	51.6	ug/L	50	ug/L	103.2	90.0 − 110.0	MS	01−AUG−21 05:58	210731−3
	Sodium	5190	ug/L	5000	ug/L	103.8	90.0 − 110.0	MS	01−AUG−21 05:58	210731−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV05										
	Uranium−235	0.35	ug/L	0.36	ug/L	97.6	90.0 − 110.0	MS	31−JUL−21 20:20	210731−1
	Uranium−238	51.3	ug/L	49.64	ug/L	103.4	90.0 − 110.0	MS	31−JUL−21 20:20	210731−1
	Aluminum	5250	ug/L	5050	ug/L	103.9	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Antimony	52.1	ug/L	50	ug/L	104.3	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Arsenic	49.7	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Barium	49.6	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Beryllium	53	ug/L	50	ug/L	106	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Cadmium	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Calcium	5090	ug/L	5000	ug/L	101.9	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Chromium	52.1	ug/L	50	ug/L	104.2	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Cobalt	51.7	ug/L	50	ug/L	103.4	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Copper	53.5	ug/L	50	ug/L	107	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Iron	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Lead	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Magnesium	5200	ug/L	5000	ug/L	104	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Manganese	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Molybdenum	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Nickel	51.9	ug/L	50	ug/L	103.7	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Potassium	5140	ug/L	5000	ug/L	102.8	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Selenium	50.8	ug/L	50	ug/L	101.5	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Silver	49.2	ug/L	50	ug/L	98.4	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Sodium	5320	ug/L	5000	ug/L	106.4	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Thallium	48.8	ug/L	50	ug/L	97.6	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Thorium	51.4	ug/L	50	ug/L	102.7	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Vanadium	51.4	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Zinc	49.4	ug/L	50	ug/L	98.9	90.0 − 110.0	MS	01−AUG−21 00:25	210731−2
	Calcium	4970	ug/L	5000	ug/L	99.3	90.0 − 110.0	MS	01−AUG−21 06:35	210731−3
	Magnesium	5120	ug/L	5000	ug/L	102.3	90.0 − 110.0	MS	01−AUG−21 06:35	210731−3
	Manganese	51.2	ug/L	50	ug/L	102.5	90.0 − 110.0	MS	01−AUG−21 06:35	210731−3
	Sodium	5190	ug/L	5000	ug/L	103.8	90.0 − 110.0	MS	01−AUG−21 06:35	210731−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV06										
	Uranium−235	0.37	ug/L	0.36	ug/L	102	90.0 − 110.0	MS	31−JUL−21 20:40	210731−1
	Uranium−238	50.7	ug/L	49.64	ug/L	102.1	90.0 − 110.0	MS	31−JUL−21 20:40	210731−1
	Aluminum	5160	ug/L	5050	ug/L	102.3	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Antimony	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Arsenic	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Barium	48.6	ug/L	50	ug/L	97.1	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Beryllium	52.8	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Cadmium	49.5	ug/L	50	ug/L	99.1	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Calcium	5040	ug/L	5000	ug/L	100.7	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Chromium	51.5	ug/L	50	ug/L	102.9	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Cobalt	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Copper	52.2	ug/L	50	ug/L	104.4	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Iron	5010	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Lead	50.6	ug/L	50	ug/L	101.2	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Magnesium	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Manganese	50.7	ug/L	50	ug/L	101.4	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Molybdenum	47.8	ug/L	50	ug/L	95.5	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Nickel	50.4	ug/L	50	ug/L	100.9	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Potassium	5050	ug/L	5000	ug/L	101.1	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Selenium	52	ug/L	50	ug/L	104.1	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Silver	48.2	ug/L	50	ug/L	96.4	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Sodium	5350	ug/L	5000	ug/L	107	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Thallium	48.5	ug/L	50	ug/L	96.9	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Thorium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Vanadium	51	ug/L	50	ug/L	102	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Zinc	50.3	ug/L	50	ug/L	100.7	90.0 − 110.0	MS	01−AUG−21 01:05	210731−2
	Calcium	4940	ug/L	5000	ug/L	98.9	90.0 − 110.0	MS	01−AUG−21 07:04	210731−3
	Magnesium	5050	ug/L	5000	ug/L	101	90.0 − 110.0	MS	01−AUG−21 07:04	210731−3
	Manganese	51.8	ug/L	50	ug/L	103.5	90.0 − 110.0	MS	01−AUG−21 07:04	210731−3
	Sodium	5120	ug/L	5000	ug/L	102.5	90.0 − 110.0	MS	01−AUG−21 07:04	210731−3

METALS
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Initial and Continuing Calibration Verification

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV07										
	Aluminum	5140	ug/L	5050	ug/L	101.8	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Antimony	51.8	ug/L	50	ug/L	103.6	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Arsenic	50	ug/L	50	ug/L	99.9	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Barium	48.9	ug/L	50	ug/L	97.9	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Beryllium	52.7	ug/L	50	ug/L	105.5	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Cadmium	49.6	ug/L	50	ug/L	99.2	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Calcium	5000	ug/L	5000	ug/L	100	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Chromium	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Cobalt	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Copper	52.7	ug/L	50	ug/L	105.3	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Iron	5030	ug/L	5000	ug/L	100.6	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Lead	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Magnesium	5090	ug/L	5000	ug/L	101.7	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Manganese	51.4	ug/L	50	ug/L	102.8	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Molybdenum	49.4	ug/L	50	ug/L	98.8	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Nickel	51.2	ug/L	50	ug/L	102.4	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Potassium	5050	ug/L	5000	ug/L	101	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Selenium	50.9	ug/L	50	ug/L	101.7	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Silver	49.5	ug/L	50	ug/L	99	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Sodium	5320	ug/L	5000	ug/L	106.4	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Thallium	48.5	ug/L	50	ug/L	97	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Thorium	51.2	ug/L	50	ug/L	102.3	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Vanadium	50.9	ug/L	50	ug/L	101.8	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2
	Zinc	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	01−AUG−21 01:44	210731−2

***Analytical Methods:**

MS SW846 3005A/6020B

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)		M*	Analysis Date/Time	Run Number
CRDL01											
	Uranium−235	.0017	ug/L	.0015	ug/L	117.2	80.0 − 120.0		MS	31−JUL−21 18:58	210731−1
	Uranium−238	.196	ug/L	.2	ug/L	98.1	80.0 − 120.0		MS	31−JUL−21 18:58	210731−1
	Aluminum	52.9	ug/L	50	ug/L	105.9	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Antimony	3.12	ug/L	3	ug/L	103.9	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Arsenic	4.86	ug/L	5	ug/L	97.3	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Barium	4.1	ug/L	4	ug/L	102.6	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Beryllium	.602	ug/L	.5	ug/L	120.4	80.0 − 120.0	*	MS	31−JUL−21 22:08	210731−2
	Cadmium	1.01	ug/L	1	ug/L	101.4	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Calcium	231	ug/L	200	ug/L	115.3	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Chromium	10.5	ug/L	10	ug/L	104.6	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Cobalt	1.06	ug/L	1	ug/L	105.5	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Copper	2.26	ug/L	2	ug/L	113.1	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Iron	103	ug/L	100	ug/L	103.1	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Lead	2.06	ug/L	2	ug/L	102.8	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Magnesium	31	ug/L	30	ug/L	103.2	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Manganese	5.26	ug/L	5	ug/L	105.2	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Molybdenum	1.04	ug/L	1	ug/L	104.3	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Nickel	2.12	ug/L	2	ug/L	105.8	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Potassium	319	ug/L	300	ug/L	106.3	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Selenium	4.95	ug/L	5	ug/L	98.9	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Silver	1.03	ug/L	1	ug/L	103.1	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Sodium	260	ug/L	250	ug/L	104.2	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Thallium	1.97	ug/L	2	ug/L	98.4	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Thorium	2.11	ug/L	2	ug/L	105.5	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Vanadium	20.9	ug/L	20	ug/L	104.4	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Zinc	20.9	ug/L	20	ug/L	104.5	80.0 − 120.0		MS	31−JUL−21 22:08	210731−2
	Calcium	227	ug/L	200	ug/L	113.7	80.0 − 120.0		MS	01−AUG−21 04:20	210731−3
	Magnesium	32.7	ug/L	30	ug/L	108.9	80.0 − 120.0		MS	01−AUG−21 04:20	210731−3
	Manganese	5.23	ug/L	5	ug/L	104.5	80.0 − 120.0		MS	01−AUG−21 04:20	210731−3
	Sodium	256	ug/L	250	ug/L	102.3	80.0 − 120.0		MS	01−AUG−21 04:20	210731−3

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 550420

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Uranium−235	0.01	+/−.04	U	0.01	0.07	LIQ	MS	31−JUL−21 18:57	210731−1
	Uranium−238	0.067	+/−.1	U	0.067	0.2	LIQ	MS	31−JUL−21 18:57	210731−1
	Aluminum	19.3	+/−25	U	19.3	50.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Antimony	1.0	+/−1.5	U	1.0	3.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Arsenic	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Barium	0.67	+/−2	U	0.67	4.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Beryllium	0.2	+/−.25	U	0.2	0.5	LIQ	MS	31−JUL−21 22:04	210731−2
	Cadmium	0.3	+/−.5	U	0.3	1.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	31−JUL−21 22:04	210731−2
	Chromium	3.0	+/−5	U	3.0	10.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Cobalt	0.3	+/−.5	U	0.3	1.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Copper	0.3	+/−1	U	0.3	2.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Iron	33.0	+/−50	U	33.0	100	LIQ	MS	31−JUL−21 22:04	210731−2
	Lead	0.5	+/−1	U	0.5	2.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Molybdenum	0.2	+/−.5	U	0.2	1.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Nickel	0.6	+/−1	U	0.6	2.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Potassium	80.0	+/−150	U	80.0	300	LIQ	MS	31−JUL−21 22:04	210731−2
	Selenium	2.0	+/−2.5	U	2.0	5.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Silver	0.3	+/−.5	U	0.3	1.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	31−JUL−21 22:04	210731−2
	Thallium	0.6	+/−1	U	0.6	2.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Thorium	0.7	+/−1	U	0.7	2.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Vanadium	3.3	+/−10	U	3.3	20.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Zinc	3.3	+/−10	U	3.3	20.0	LIQ	MS	31−JUL−21 22:04	210731−2
	Calcium	80.0	+/−100	U	80.0	200	LIQ	MS	01−AUG−21 04:16	210731−3
	Magnesium	10.0	+/−15	U	10.0	30.0	LIQ	MS	01−AUG−21 04:16	210731−3
	Manganese	1.0	+/−2.5	U	1.0	5.0	LIQ	MS	01−AUG−21 04:16	210731−3
	Sodium	80.0	+/−125	U	80.0	250	LIQ	MS	01−AUG−21 04:16	210731−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 550420

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB01										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	31−JUL−21 19:06	210731−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	31−JUL−21 19:06	210731−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	31−JUL−21 22:22	210731−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	31−JUL−21 22:22	210731−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	31−JUL−21 22:22	210731−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Molybdenum	0.775	+/−1	J	0.2	1.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	31−JUL−21 22:22	210731−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	31−JUL−21 22:22	210731−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	31−JUL−21 22:22	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−AUG−21 04:34	210731−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	01−AUG−21 04:34	210731−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−AUG−21 04:34	210731−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−AUG−21 04:34	210731−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 550420

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB02										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	31−JUL−21 19:23	210731−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	31−JUL−21 19:23	210731−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	31−JUL−21 22:33	210731−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	31−JUL−21 22:33	210731−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	31−JUL−21 22:33	210731−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Molybdenum	0.477	+/−1	J	0.2	1.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	31−JUL−21 22:33	210731−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	31−JUL−21 22:33	210731−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	31−JUL−21 22:33	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−AUG−21 04:45	210731−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	01−AUG−21 04:45	210731−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−AUG−21 04:45	210731−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−AUG−21 04:45	210731−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 550420

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB03										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	31−JUL−21 19:43	210731−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	31−JUL−21 19:43	210731−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	31−JUL−21 23:09	210731−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	31−JUL−21 23:09	210731−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	31−JUL−21 23:09	210731−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	31−JUL−21 23:09	210731−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	31−JUL−21 23:09	210731−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	31−JUL−21 23:09	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−AUG−21 05:25	210731−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	01−AUG−21 05:25	210731−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−AUG−21 05:25	210731−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−AUG−21 05:25	210731−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 550420

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB04										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	31−JUL−21 20:03	210731−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	31−JUL−21 20:03	210731−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	31−JUL−21 23:49	210731−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	31−JUL−21 23:49	210731−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	31−JUL−21 23:49	210731−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	31−JUL−21 23:49	210731−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	31−JUL−21 23:49	210731−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	31−JUL−21 23:49	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−AUG−21 06:02	210731−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	01−AUG−21 06:02	210731−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−AUG−21 06:02	210731−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−AUG−21 06:02	210731−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 550420

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB05										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	31−JUL−21 20:22	210731−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	31−JUL−21 20:22	210731−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	01−AUG−21 00:29	210731−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−AUG−21 00:29	210731−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	01−AUG−21 00:29	210731−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	01−AUG−21 00:29	210731−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−AUG−21 00:29	210731−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−AUG−21 00:29	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−AUG−21 06:38	210731−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	01−AUG−21 06:38	210731−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−AUG−21 06:38	210731−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−AUG−21 06:38	210731−3

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 550420

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB06										
	Uranium−235	0.01	+/−.07	U	0.01	0.07	LIQ	MS	31−JUL−21 20:42	210731−1
	Uranium−238	0.067	+/−.2	U	0.067	0.2	LIQ	MS	31−JUL−21 20:42	210731−1
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	01−AUG−21 01:08	210731−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−AUG−21 01:08	210731−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	01−AUG−21 01:08	210731−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	01−AUG−21 01:08	210731−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−AUG−21 01:08	210731−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−AUG−21 01:08	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−AUG−21 07:08	210731−3
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	01−AUG−21 07:08	210731−3
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−AUG−21 07:08	210731−3
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−AUG−21 07:08	210731−3

SW846

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 550420

Contract: DMAX00801

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB07										
	Aluminum	19.3	+/−50	U	19.3	50.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Antimony	1.0	+/−3	U	1.0	3.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Arsenic	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Barium	0.67	+/−4	U	0.67	4.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Beryllium	0.2	+/−.5	U	0.2	0.5	LIQ	MS	01−AUG−21 01:48	210731−2
	Cadmium	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Calcium	80.0	+/−200	U	80.0	200	LIQ	MS	01−AUG−21 01:48	210731−2
	Chromium	3.0	+/−10	U	3.0	10.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Cobalt	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Copper	0.3	+/−2	U	0.3	2.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Iron	33.0	+/−100	U	33.0	100	LIQ	MS	01−AUG−21 01:48	210731−2
	Lead	0.5	+/−2	U	0.5	2.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Magnesium	10.0	+/−30	U	10.0	30.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Manganese	1.0	+/−5	U	1.0	5.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Molybdenum	0.2	+/−1	U	0.2	1.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Nickel	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Potassium	80.0	+/−300	U	80.0	300	LIQ	MS	01−AUG−21 01:48	210731−2
	Selenium	2.0	+/−5	U	2.0	5.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Silver	0.3	+/−1	U	0.3	1.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Sodium	80.0	+/−250	U	80.0	250	LIQ	MS	01−AUG−21 01:48	210731−2
	Thallium	0.6	+/−2	U	0.6	2.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Thorium	0.7	+/−2	U	0.7	2.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Vanadium	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−AUG−21 01:48	210731−2
	Zinc	3.3	+/−20	U	3.3	20.0	LIQ	MS	01−AUG−21 01:48	210731−2

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 550420
Contract: DMAX00801
Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204870187								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0
1204870192								
	Aluminum	19.3	ug/L	+/−25	U	MS	19.3	25.0
	Antimony	1.00	ug/L	+/−1.5	U	MS	1.00	1.50
	Arsenic	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Barium	0.670	ug/L	+/−2	U	MS	0.670	2.00
	Beryllium	0.200	ug/L	+/−0.25	U	MS	0.200	0.250
	Cadmium	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Calcium	80.0	ug/L	+/−100	U	MS	80.0	100
	Chromium	3.00	ug/L	+/−5	U	MS	3.00	5.00
	Cobalt	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Copper	0.300	ug/L	+/−1	U	MS	0.300	1.00
	Iron	33.0	ug/L	+/−50	U	MS	33.0	50.0

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 550420

Contract: DMAX00801

Matrix: WG

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
	Lead	0.500	ug/L	+/−1	U	MS	0.500	1.00
	Magnesium	10.0	ug/L	+/−15	U	MS	10.0	15.0
	Manganese	1.00	ug/L	+/−2.5	U	MS	1.00	2.50
	Molybdenum	0.200	ug/L	+/−0.5	U	MS	0.200	0.500
	Nickel	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Potassium	80.0	ug/L	+/−150	U	MS	80.0	150
	Selenium	2.00	ug/L	+/−2.5	U	MS	2.00	2.50
	Silver	0.300	ug/L	+/−0.5	U	MS	0.300	0.500
	Sodium	80.0	ug/L	+/−125	U	MS	80.0	125
	Thallium	0.600	ug/L	+/−1	U	MS	0.600	1.00
	Thorium	0.700	ug/L	+/−1	U	MS	0.700	1.00
	Uranium−235	0.0100	ug/L	+/−0.035	U	MS	0.0100	0.0350
	Uranium−238	0.0670	ug/L	+/−0.1	U	MS	0.0670	0.100
	Vanadium	3.30	ug/L	+/−10	U	MS	3.30	10.0
	Zinc	3.30	ug/L	+/−10	U	MS	3.30	10.0

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−4−
Interference Check Sample

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium−235	0.0003	ug/L					31−JUL−21 19:00	210731−1
	Uranium−238	0.018	ug/L					31−JUL−21 19:00	210731−1
ICSAB01									
	Uranium−235	0.14	ug/L	.145	ug/L	96.2	80.0 − 120.0	31−JUL−21 19:02	210731−1
	Uranium−238	19.3	ug/L	19.86	ug/L	97.4	80.0 − 120.0	31−JUL−21 19:02	210731−1

METALS
−4−
Interference Check Sample

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	98500	ug/L	100000	ug/L	98.5	80.0 − 120.0	31−JUL−21 22:11	210731−2
	Antimony	0.193	ug/L					31−JUL−21 22:11	210731−2
	Arsenic	0.328	ug/L					31−JUL−21 22:11	210731−2
	Barium	0.21	ug/L					31−JUL−21 22:11	210731−2
	Beryllium	0.006	ug/L					31−JUL−21 22:11	210731−2
	Cadmium	1.18	ug/L					31−JUL−21 22:11	210731−2
	Calcium	97500	ug/L	100000	ug/L	97.5	80.0 − 120.0	31−JUL−21 22:11	210731−2
	Chromium	0.768	ug/L					31−JUL−21 22:11	210731−2
	Cobalt	0.968	ug/L					31−JUL−21 22:11	210731−2
	Copper	0.554	ug/L					31−JUL−21 22:11	210731−2
	Iron	94700	ug/L	100000	ug/L	94.7	80.0 − 120.0	31−JUL−21 22:11	210731−2
	Lead	0.438	ug/L					31−JUL−21 22:11	210731−2
	Magnesium	96300	ug/L	100000	ug/L	96.3	80.0 − 120.0	31−JUL−21 22:11	210731−2
	Manganese	9.51	ug/L					31−JUL−21 22:11	210731−2
	Molybdenum	2010	ug/L	2000	ug/L	101	80.0 − 120.0	31−JUL−21 22:11	210731−2
	Nickel	1.03	ug/L					31−JUL−21 22:11	210731−2
	Potassium	96100	ug/L	100000	ug/L	96.1	80.0 − 120.0	31−JUL−21 22:11	210731−2
	Selenium	0.091	ug/L					31−JUL−21 22:11	210731−2
	Silver	0.014	ug/L					31−JUL−21 22:11	210731−2
	Sodium	98800	ug/L	100000	ug/L	98.8	80.0 − 120.0	31−JUL−21 22:11	210731−2
	Thallium	0.08	ug/L					31−JUL−21 22:11	210731−2
	Thorium	0.271	ug/L					31−JUL−21 22:11	210731−2
	Vanadium	0.219	ug/L					31−JUL−21 22:11	210731−2
	Zinc	2.56	ug/L					31−JUL−21 22:11	210731−2
ICSAB01									
	Aluminum	99200	ug/L	100000	ug/L	99.2	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Antimony	20.9	ug/L	20	ug/L	105	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Arsenic	21.1	ug/L	20	ug/L	105	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Barium	19.5	ug/L	20	ug/L	97.3	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Beryllium	19.6	ug/L	20	ug/L	98.1	80.0 − 120.0	31−JUL−21 22:15	210731−2

METALS
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Interference Check Sample

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cadmium	20.7	ug/L	20.83	ug/L	99.2	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Calcium	97500	ug/L	100000	ug/L	97.5	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Chromium	21.1	ug/L	20	ug/L	106	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Cobalt	20.7	ug/L	21.05	ug/L	98.4	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Copper	19.6	ug/L	20	ug/L	98	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Iron	95700	ug/L	100000	ug/L	95.8	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Lead	19.3	ug/L	20	ug/L	96.7	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Magnesium	96700	ug/L	100000	ug/L	96.7	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Manganese	29.5	ug/L	24.94	ug/L	118	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Molybdenum	2010	ug/L	2000	ug/L	101	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Nickel	20.1	ug/L	21	ug/L	95.5	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Potassium	97100	ug/L	100000	ug/L	97.1	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Selenium	21.7	ug/L	20	ug/L	109	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Silver	18.8	ug/L	20	ug/L	94.1	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Sodium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Thallium	18.4	ug/L	20	ug/L	92.1	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Thorium	20.7	ug/L	20	ug/L	103	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Vanadium	20.9	ug/L	20	ug/L	104	80.0 − 120.0	31−JUL−21 22:15	210731−2
	Zinc	21.8	ug/L	20	ug/L	109	80.0 − 120.0	31−JUL−21 22:15	210731−2

METALS
−4−
Interference Check Sample

SDG No: 550420

Contract: DMAX00801 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Calcium	97300	ug/L	100000	ug/L	97.3	80.0 − 120.0	01−AUG−21 04:23	210731−3
	Magnesium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	01−AUG−21 04:23	210731−3
	Manganese	9.09	ug/L					01−AUG−21 04:23	210731−3
	Sodium	102000	ug/L	100000	ug/L	102	80.0 − 120.0	01−AUG−21 04:23	210731−3
ICSAB01									
	Calcium	95200	ug/L	100000	ug/L	95.2	80.0 − 120.0	01−AUG−21 04:27	210731−3
	Magnesium	99200	ug/L	100000	ug/L	99.2	80.0 − 120.0	01−AUG−21 04:27	210731−3
	Manganese	28.6	ug/L	24.94	ug/L	115	80.0 − 120.0	01−AUG−21 04:27	210731−3
	Sodium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	01−AUG−21 04:27	210731−3

METALS
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Matrix Spike Summary

SDG NO. 550420 **Client ID** HA20−CMT−4D3−07152021S

Contract: DMAX00801 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 550420001 **Spike ID:** 1204870189

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Lead	ug/L	75−125	49.9		0.500	U	50.0	99.6		MS
Magnesium	ug/L		18300		16400		2000	96.6	N/A	MS
Manganese	ug/L		615		560		50.0	109	N/A	MS
Molybdenum	ug/L	75−125	94.0		39.8		50.0	108		MS
Nickel	ug/L	75−125	48.9		0.600	U	50.0	97.2		MS
Potassium	ug/L	75−125	4920		2820		2000	105		MS
Selenium	ug/L	75−125	49.7		2.00	U	50.0	99.3		MS
Silver	ug/L	75−125	51.0		0.300	U	50.0	102		MS
Sodium	ug/L		45600		43800		2000	90.6	N/A	MS
Thallium	ug/L	75−125	48.4		0.600	U	50.0	96.7		MS
Thorium	ug/L	75−125	50.3		0.700	U	50.0	100		MS
Uranium−235	ug/L	75−125	0.510		0.140		0.360	103		MS
Uranium−238	ug/L	75−125	69.3		19.2		49.6	101		MS
Vanadium	ug/L	75−125	53.8		3.55	J	50.0	101		MS
Zinc	ug/L	75−125	48.2		3.30	U	50.0	93.3		MS
Aluminum	ug/L	75−125	2100		26.4	J	2000	104		MS
Antimony	ug/L	75−125	53.8		1.61	J	50.0	104		MS
Arsenic	ug/L	75−125	53.8		4.27	J	50.0	99.1		MS
Barium	ug/L	75−125	73.8		23.9		50.0	99.8		MS
Beryllium	ug/L	75−125	56.2		0.200	U	50.0	112		MS
Cadmium	ug/L	75−125	50.2		0.300	U	50.0	100		MS
Calcium	ug/L		41400		38300		2000	157	N/A	MS

METALS
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Matrix Spike Summary

SDG NO.	550420	**Client ID**	HA20−CMT−4D3−07152021S
Contract:	DMAX00801	**Level:**	Low
Matrix:	WATER	**% Solids:**	
Sample ID:	550420001	**Spike ID:**	1204870189

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Chromium	ug/L	75−125	51.4		3.00	U	50.0	101		MS
Cobalt	ug/L	75−125	49.8		0.333	J	50.0	99		MS
Copper	ug/L	75−125	48.6		0.323	J	50.0	96.6		MS
Iron	ug/L	75−125	2010		51.9	J	2000	97.9		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Matrix Spike Duplicate Summary

SDG NO. 550420 **Client ID** HA20−CMT−4D3−07152021SD

Contract: DMAX00801 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 550420001 **Spike ID:** 1204870190

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	ug/L	75−125	2100		26.4	J	2000	104		MS
Antimony	ug/L	75−125	53.2		1.61	J	50.0	103		MS
Arsenic	ug/L	75−125	52.9		4.27	J	50.0	97.3		MS
Barium	ug/L	75−125	71.8		23.9		50.0	95.7		MS
Beryllium	ug/L	75−125	56.6		0.200	U	50.0	113		MS
Cadmium	ug/L	75−125	50.2		0.300	U	50.0	100		MS
Calcium	ug/L		39000		38300		2000	37.1	N/A	MS
Chromium	ug/L	75−125	50.6		3.00	U	50.0	99.4		MS
Cobalt	ug/L	75−125	49.4		0.333	J	50.0	98.1		MS
Copper	ug/L	75−125	48.4		0.323	J	50.0	96.2		MS
Iron	ug/L	75−125	2000		51.9	J	2000	97.3		MS
Lead	ug/L	75−125	49.2		0.500	U	50.0	98.1		MS
Magnesium	ug/L		17600		16400		2000	64.4	N/A	MS
Manganese	ug/L		584		560		50.0	46.5	N/A	MS
Molybdenum	ug/L	75−125	88.8		39.8		50.0	98.1		MS
Nickel	ug/L	75−125	49.0		0.600	U	50.0	97.3		MS
Potassium	ug/L	75−125	4810		2820		2000	99.5		MS
Selenium	ug/L	75−125	49.6		2.00	U	50.0	99.1		MS
Silver	ug/L	75−125	50.0		0.300	U	50.0	99.9		MS
Sodium	ug/L		43900		43800		2000	4.78	N/A	MS
Thallium	ug/L	75−125	47.9		0.600	U	50.0	95.7		MS
Thorium	ug/L	75−125	50.0		0.700	U	50.0	99.5		MS

METALS
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Matrix Spike Duplicate Summary

SDG NO. 550420 **Client ID** HA20−CMT−4D3−07152021SD

Contract: DMAX00801 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 550420001 **Spike ID:** 1204870190

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Uranium−235	ug/L	75−125	0.505		0.140		0.360	101		MS
Uranium−238	ug/L	75−125	68.3		19.2		49.6	98.8		MS
Vanadium	ug/L	75−125	53.7		3.55	J	50.0	100		MS
Zinc	ug/L	75−125	48.3		3.30	U	50.0	93.6		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Summary

SDG NO. 550420 **Client ID** HA20−CMT−2D2−07192021S

Contract: DMAX00801 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 550420013 **Spike ID:** 1204870194

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Iron	ug/L	75−125	2120		169		2000	97.3		MS
Lead	ug/L	75−125	48.1		0.500	U	50.0	96.1		MS
Magnesium	ug/L		13000		11000		2000	98.2	N/A	MS
Manganese	ug/L		969		949		50.0	39.7	N/A	MS
Molybdenum	ug/L	75−125	60.3		9.75		50.0	101		MS
Nickel	ug/L	75−125	50.0		0.600	U	50.0	99.1		MS
Potassium	ug/L	75−125	6580		4600		2000	98.6		MS
Selenium	ug/L	75−125	48.2		2.00	U	50.0	96.2		MS
Silver	ug/L	75−125	50.0		0.300	U	50.0	100		MS
Sodium	ug/L		25600		23700		2000	91.7	N/A	MS
Thallium	ug/L	75−125	47.3		0.600	U	50.0	94.6		MS
Thorium	ug/L	75−125	47.3		0.700	U	50.0	94.2		MS
Uranium−235	ug/L	75−125	0.505		0.147		0.360	99.4		MS
Uranium−238	ug/L	75−125	70.1		21.6		49.6	97.7		MS
Vanadium	ug/L	75−125	51.6		3.30	U	50.0	99.1		MS
Zinc	ug/L	75−125	47.5		3.30	U	50.0	93.6		MS
Aluminum	ug/L	75−125	2000		19.3	U	2000	99.4		MS
Antimony	ug/L	75−125	52.3		1.00	U	50.0	104		MS
Arsenic	ug/L	75−125	71.9		23.3		50.0	97.2		MS
Barium	ug/L	75−125	73.7		30.0		50.0	87.4		MS
Beryllium	ug/L	75−125	57.8		0.200	U	50.0	115		MS
Cadmium	ug/L	75−125	50.1		0.300	U	50.0	100		MS

METALS
−5a−

Matrix Spike Summary

SDG NO. 550420 **Client ID** HA20−CMT−2D2−07192021S

Contract: DMAX00801 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 550420013 **Spike ID:** 1204870194

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Calcium	ug/L		47400		46100		2000	65.2	N/A	MS
Chromium	ug/L	75−125	49.8		3.00	U	50.0	98.4		MS
Cobalt	ug/L	75−125	50.5		0.453	J	50.0	100		MS
Copper	ug/L	75−125	48.8		0.373	J	50.0	96.8		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 550420 **Client ID** HA20−CMT−2D2−07192021SD

Contract: DMAX00801 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 550420013 **Spike ID:** 1204870195

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Cobalt	ug/L	75−125	50.3		0.453	J	50.0	99.8		MS
Copper	ug/L	75−125	49.0		0.373	J	50.0	97.3		MS
Iron	ug/L	75−125	2150		169		2000	99.2		MS
Lead	ug/L	75−125	48.7		0.500	U	50.0	97.2		MS
Magnesium	ug/L		13400		11000		2000	119	N/A	MS
Manganese	ug/L		991		949		50.0	83.6	N/A	MS
Molybdenum	ug/L	75−125	59.6		9.75		50.0	99.7		MS
Nickel	ug/L	75−125	49.7		0.600	U	50.0	98.6		MS
Potassium	ug/L	75−125	6670		4600		2000	103		MS
Selenium	ug/L	75−125	48.3		2.00	U	50.0	96.3		MS
Silver	ug/L	75−125	49.7		0.300	U	50.0	99.3		MS
Sodium	ug/L		26000		23700		2000	116	N/A	MS
Thallium	ug/L	75−125	47.6		0.600	U	50.0	95.1		MS
Thorium	ug/L	75−125	48.4		0.700	U	50.0	96.5		MS
Uranium−235	ug/L	75−125	0.507		0.147		0.360	100		MS
Uranium−238	ug/L	75−125	69.7		21.6		49.6	96.9		MS
Vanadium	ug/L	75−125	51.9		3.30	U	50.0	99.8		MS
Zinc	ug/L	75−125	49.2		3.30	U	50.0	97.1		MS
Aluminum	ug/L	75−125	2050		19.3	U	2000	102		MS
Antimony	ug/L	75−125	51.2		1.00	U	50.0	102		MS
Arsenic	ug/L	75−125	72.3		23.3		50.0	98.1		MS
Barium	ug/L	75−125	76.3		30.0		50.0	92.5		MS

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 550420 **Client ID** HA20−CMT−2D2−07192021SD

Contract: DMAX00801 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 550420013 **Spike ID:** 1204870195

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Beryllium	ug/L	75−125	58.8		0.200	U	50.0	118		MS
Cadmium	ug/L	75−125	50.0		0.300	U	50.0	99.9		MS
Calcium	ug/L		47900		46100		2000	89.6	N/A	MS
Chromium	ug/L	75−125	50.7		3.00	U	50.0	100		MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

Metals
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Duplicate Sample Summary

SDG No.: 550420 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA20−CMT−4D3−07152021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204870189 **Duplicate ID:** 1204870190 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2100		2100		.166		MS
Antimony	ug/L	+/−20	53.8		53.2		1.2		MS
Arsenic	ug/L	+/−20	53.8		52.9		1.65		MS
Barium	ug/L	+/−20	73.8		71.8		2.82		MS
Beryllium	ug/L	+/−20	56.2		56.6		.761		MS
Cadmium	ug/L	+/−20	50.2		50.2		.00797		MS
Calcium	ug/L	+/−20	41400		39000		5.96		MS
Chromium	ug/L	+/−20	51.4		50.6		1.53		MS
Cobalt	ug/L	+/−20	49.8		49.4		.903		MS
Copper	ug/L	+/−20	48.6		48.4		.472		MS
Iron	ug/L	+/−20	2010		2000		.532		MS
Lead	ug/L	+/−20	49.9		49.2		1.46		MS
Magnesium	ug/L	+/−20	18300		17600		3.58		MS
Manganese	ug/L	+/−20	615		584		5.23		MS
Molybdenum	ug/L	+/−20	94.0		88.8		5.65		MS
Nickel	ug/L	+/−20	48.9		49.0		.0429		MS
Potassium	ug/L	+/−20	4920		4810		2.25		MS
Selenium	ug/L	+/−20	49.7		49.6		.169		MS
Silver	ug/L	+/−20	51.0		50.0		1.94		MS
Sodium	ug/L	+/−20	45600		43900		3.83		MS
Thallium	ug/L	+/−20	48.4		47.9		1.04		MS
Thorium	ug/L	+/−20	50.3		50.0		.764		MS
Uranium−235	ug/L	+/−20	0.510		0.505		1.1		MS
Uranium−238	ug/L	+/−20	69.3		68.3		1.46		MS
Vanadium	ug/L	+/−20	53.8		53.7		.121		MS
Zinc	ug/L	+/−20	48.2		48.3		.261		MS

Metals
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Duplicate Sample Summary

SDG No.: 550420 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA20−CMT−4D3−07152021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204870189 **Duplicate ID:** 1204870190 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

Metals
−6−
Duplicate Sample Summary

SDG No.: 550420 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA20−CMT−2D2−07192021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204870194 **Duplicate ID:** 1204870195 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	ug/L	+/−20	2000		2050		2.27		MS
Antimony	ug/L	+/−20	52.3		51.2		1.98		MS
Arsenic	ug/L	+/−20	71.9		72.3		.623		MS
Barium	ug/L	+/−20	73.7		76.3		3.41		MS
Beryllium	ug/L	+/−20	57.8		58.8		1.77		MS
Cadmium	ug/L	+/−20	50.1		50.0		.23		MS
Calcium	ug/L	+/−20	47400		47900		1.03		MS
Chromium	ug/L	+/−20	49.8		50.7		1.81		MS
Cobalt	ug/L	+/−20	50.5		50.3		.416		MS
Copper	ug/L	+/−20	48.8		49.0		.552		MS
Iron	ug/L	+/−20	2120		2150		1.74		MS
Lead	ug/L	+/−20	48.1		48.7		1.22		MS
Magnesium	ug/L	+/−20	13000		13400		3.1		MS
Manganese	ug/L	+/−20	969		991		2.24		MS
Molybdenum	ug/L	+/−20	60.3		59.6		1.24		MS
Nickel	ug/L	+/−20	50.0		49.7		.512		MS
Potassium	ug/L	+/−20	6580		6670		1.41		MS
Selenium	ug/L	+/−20	48.2		48.3		.141		MS
Silver	ug/L	+/−20	50.0		49.7		.69		MS
Sodium	ug/L	+/−20	25600		26000		1.88		MS
Thallium	ug/L	+/−20	47.3		47.6		.615		MS
Thorium	ug/L	+/−20	47.3		48.4		2.34		MS
Uranium−235	ug/L	+/−20	0.505		0.507		.415		MS
Uranium−238	ug/L	+/−20	70.1		69.7		.564		MS
Vanadium	ug/L	+/−20	51.6		51.9		.682		MS
Zinc	ug/L	+/−20	47.5		49.2		3.63		MS

Metals
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Duplicate Sample Summary

SDG No.: 550420 **Lab Code:** GEL

Contract: DMAX00801 **Client ID:** HA20−CMT−2D2−07192021SD

Matrix: LIQUID **Level:** Low

Sample ID: 1204870194 **Duplicate ID:** 1204870195 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*

***Analytical Methods:**
MS SW846 3005A/6020B

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 550420

Contract: DMAX00801

Aqueous LCS Source: Enviromental Express **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204870188								
	Aluminum	ug/L	2000	2110		105	80−120	MS
	Antimony	ug/L	50.0	49.7		99.4	80−120	MS
	Arsenic	ug/L	50.0	48.1		96.2	80−120	MS
	Barium	ug/L	50.0	48.5		97	80−120	MS
	Beryllium	ug/L	50.0	54.9		110	80−120	MS
	Cadmium	ug/L	50.0	49.8		99.7	80−120	MS
	Calcium	ug/L	2000	2050		103	80−120	MS
	Chromium	ug/L	50.0	50.8		102	80−120	MS
	Cobalt	ug/L	50.0	50.0		99.9	80−120	MS
	Copper	ug/L	50.0	50.4		101	80−120	MS
	Iron	ug/L	2000	2010		100	80−120	MS
	Lead	ug/L	50.0	49.7		99.4	80−120	MS
	Magnesium	ug/L	2000	2120		106	80−120	MS
	Manganese	ug/L	50.0	50.3		101	80−120	MS
	Molybdenum	ug/L	50.0	48.7		97.3	80−120	MS
	Nickel	ug/L	50.0	50.1		100	80−120	MS
	Potassium	ug/L	2000	2090		105	80−120	MS
	Selenium	ug/L	50.0	48.2		96.5	80−120	MS
	Silver	ug/L	50.0	50.8		102	80−120	MS
	Sodium	ug/L	2000	2110		105	80−120	MS
	Thallium	ug/L	50.0	48.5		97	80−120	MS
	Thorium	ug/L	50.0	49.5		99.1	80−120	MS
	Uranium−235	ug/L	0.360	0.347		96.3	80−120	MS
	Uranium−238	ug/L	49.6	48.8		98.2	80−120	MS
	Vanadium	ug/L	50.0	51.7		103	80−120	MS
	Zinc	ug/L	50.0	48.3		96.5	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 550420

Contract: DMAX00801

Aqueous LCS Source: Enviromental Express **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204870193								
	Potassium	ug/L	2000	2050		102	80−120	MS
	Selenium	ug/L	50.0	47.5		95	80−120	MS
	Silver	ug/L	50.0	49.4		98.7	80−120	MS
	Sodium	ug/L	2000	2050		102	80−120	MS
	Thallium	ug/L	50.0	48.5		97	80−120	MS
	Thorium	ug/L	50.0	49.1		98.3	80−120	MS
	Uranium−235	ug/L	0.360	0.345		95.8	80−120	MS
	Uranium−238	ug/L	49.6	48.2		97.1	80−120	MS
	Vanadium	ug/L	50.0	50.5		101	80−120	MS
	Zinc	ug/L	50.0	50.0		100	80−120	MS
	Nickel	ug/L	50.0	48.8		97.6	80−120	MS
	Aluminum	ug/L	2000	2020		101	80−120	MS
	Antimony	ug/L	50.0	48.8		97.7	80−120	MS
	Arsenic	ug/L	50.0	48.2		96.3	80−120	MS
	Barium	ug/L	50.0	48.3		96.6	80−120	MS
	Beryllium	ug/L	50.0	54.7		109	80−120	MS
	Cadmium	ug/L	50.0	48.6		97.2	80−120	MS
	Calcium	ug/L	2000	2040		102	80−120	MS
	Chromium	ug/L	50.0	49.5		99	80−120	MS
	Cobalt	ug/L	50.0	49.1		98.2	80−120	MS
	Copper	ug/L	50.0	50.0		100	80−120	MS
	Iron	ug/L	2000	1950		97.6	80−120	MS
	Lead	ug/L	50.0	49.6		99.1	80−120	MS
	Magnesium	ug/L	2000	2050		103	80−120	MS
	Manganese	ug/L	50.0	49.3		98.7	80−120	MS
	Molybdenum	ug/L	50.0	47.2		94.4	80−120	MS

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 550420 **Client ID** HA20-CMT-4D3-07152021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 550420001 **Serial Dilution ID:** 1204870191

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	26.4	J	96.5	U	.379			MS
Antimony	1.61	J	5	U	49.221			MS
Arsenic	4.27	J	10	U	3.233			MS
Barium	23.9		23.8		.598			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	38300		36900		3.651		20	MS
Chromium	3	U	15	U				MS
Cobalt	.333	J	1.5	U	2.102			MS
Copper	.323	J	1.5	U	2.167			MS
Iron	51.9	J	165	U	7.824			MS
Lead	.5	U	2.5	U				MS
Magnesium	16400		15500		4.977		20	MS
Manganese	560		552		1.521		20	MS
Molybdenum	39.8		37.2		6.443		20	MS
Nickel	.6	U	3	U				MS
Potassium	2820		2630		6.796			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	43800		40700		7.023		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium-235	.14		.132	J	5.579			MS
Uranium-238	19.2		19.2		.211		20	MS
Vanadium	3.55	J	16.5	U	2.394			MS
Zinc	3.3	U	16.5	U				MS

METALS
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Serial Dilution Sample Summary

SDG NO. 550420 **Client ID:** HA20−CMT−4D3−07152021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 550420001 **Serial Dilution ID:** 1204870191

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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Serial Dilution Sample Summary

SDG NO. 550420 **Client ID** HA20-CMT-2D2-07192021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 550420013 **Serial Dilution ID:** 1204870196

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	19.3	U	96.5	U				MS
Antimony	1	U	5	U				MS
Arsenic	23.3		23.2	J	.494			MS
Barium	30		27.5		8.196			MS
Beryllium	.2	U	1	U				MS
Cadmium	.3	U	1.5	U				MS
Calcium	46100		44800		2.908		20	MS
Chromium	3	U	15	U				MS
Cobalt	.453	J	1.5	U	5.96			MS
Copper	.373	J	1.5	U	10.188			MS
Iron	169		165	U	4.741			MS
Lead	.5	U	2.5	U				MS
Magnesium	11000		10800		2.383		20	MS
Manganese	949		936		1.328		20	MS
Molybdenum	9.75		8.76		10.224			MS
Nickel	.6	U	3	U				MS
Potassium	4600		4400		4.333			MS
Selenium	2	U	10	U				MS
Silver	.3	U	1.5	U				MS
Sodium	23700		23000		3.055		20	MS
Thallium	.6	U	3	U				MS
Thorium	.7	U	3.5	U				MS
Uranium-235	.147		.153	J	3.87			MS
Uranium-238	21.6		21.1		2.185		20	MS
Vanadium	3.3	U	16.5	U				MS
Zinc	3.3	U	16.5	U				MS

METALS
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Serial Dilution Sample Summary

SDG NO. 550420 **Client ID** HA20−CMT−2D2−07192021L

Contract: DMAX00801

Matrix: LIQUID **Level:** Low

Sample ID: 550420013 **Serial Dilution ID:** 1204870196

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*

***Analytical Methods:**

MS **SW846 3005A/6020B**

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 550420 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2153914							
1204870187	MB for batch 2153914	MB	W	29−JUL−21	50mL	50mL	
1204870188	LCS for batch 2153914	LCS	W	29−JUL−21	50mL	50mL	
1204870189	HA20−CMT−4D3−07152021S	MS	W	29−JUL−21	50mL	50mL	
1204870190	HA20−CMT−4D3−07152021SD	MSD	W	29−JUL−21	50mL	50mL	
550420001	HA20−CMT−4D3−07152021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420002	HA20−CMT−4D3−07152021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420003	HA20−CMT−5D1−07152021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420004	HA20−CMT−5D1−07152021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420005	HA20−CMT−5D3−07152021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420006	HA20−CMT−5D3−07152021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420007	HA20−CMT−6D3−07162021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420008	HA20−CMT−6D3−07162021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420009	HA20−CMT−1D1−07162021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420010	HA20−CMT−1D1−07162021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420011	HA20−CMT−1D2−07162021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420012	HA20−CMT−1D2−07162021	SAMPLE	W	29−JUL−21	50mL	50mL	
Batch Number 2153916							
1204870192	MB for batch 2153916	MB	W	29−JUL−21	50mL	50mL	
1204870193	LCS for batch 2153916	LCS	W	29−JUL−21	50mL	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 550420 **Method Type:** MS

Contract: DMAX00801 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
1204870194	HA20−CMT−2D2−07192021S	MS	W	29−JUL−21	50mL	50mL	
1204870195	HA20−CMT−2D2−07192021SD	MSD	W	29−JUL−21	50mL	50mL	
550420013	HA20−CMT−2D2−07192021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420014	HA20−CMT−2D2−07192021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420015	HA20−CMT−2D3−07192021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420016	HA20−CMT−2D3−07192021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420017	HA20−CMT−3D3−07192021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420018	HA20−CMT−3D3−07192021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420019	HA20−CMT−3D4−07202021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420020	HA20−CMT−3D4−07202021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420021	HA20−CMT−3T(OW)−07202021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420022	HA20−CMT−3T(OW)−07202021	SAMPLE	W	29−JUL−21	50mL	50mL	
550420023	HA20−CMT−3T(OW)−07202021 DU	SAMPLE	W	29−JUL−21	50mL	50mL	
550420024	HA20−CMT−3T(OW)−07202021 DU	SAMPLE	W	29−JUL−21	50mL	50mL	

SW846

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 550420

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 31-JUL-21 **End Date:** 01-AUG-21 **Data File:** 210731-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	18:50:03																							X	X		
S10	1	18:51:49																							X	X		
S100	1	18:53:36																							X	X		
ICV01	1	18:55:22																							X	X		
ICB01	1	18:57:10																							X	X		
CRDL01	1	18:58:57																							X	X		
ICSA01	1	19:00:45																							X	X		
ICSAB01	1	19:02:34																							X	X		
CCV01	1	19:04:22																							X	X		
CCB01	1	19:06:10																							X	X		
ZZZZZZ	1	19:07:58																										
ZZZZZZ	1	19:09:44																										
ZZZZZZ	1	19:11:31																										
ZZZZZZ	1	19:13:17																										
ZZZZZZ	1	19:15:04																										
ZZZZZZ	1	19:16:51																										
ZZZZZZ	5	19:18:37																										
ZZZZZZ	1	19:20:24																										
CCV02	1	19:22:12																							X	X		
CCB02	1	19:23:59																							X	X		
1204870187	1	19:25:47																							X	X		
1204870188	1	19:27:33																							X	X		
550420001	1	19:29:20																							X	X		
1204870189	1	19:31:06																							X	X		
1204870190	1	19:32:53																							X	X		
ZZZZZZ	1	19:34:40																										
1204870191	5	19:36:27																							X	X		
550420002	1	19:38:14																							X	X		
550420003	1	19:40:01																							X	X		
CCV03	1	19:41:48																							X	X		
CCB03	1	19:43:35																							X	X		
550420004	1	19:45:22																							X	X		
550420005	1	19:47:09																							X	X		
550420006	1	19:48:56																							X	X		
550420007	1	19:50:42																							X	X		
550420008	1	19:52:29																							X	X		
550420009	1	19:54:15																							X	X		
550420010	1	19:56:02																							X	X		
550420011	1	19:57:48																							X	X		
550420012	1	19:59:35																							X	X		
CCV04	1	20:01:22																							X	X		

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 550420

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 31-JUL-21 **End Date:** 01-AUG-21 **Data File:** 210731-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB04	1	20:03:10																							X	X		
1204870192	1	20:04:58																							X	X		
1204870193	1	20:06:44																							X	X		
550420013	1	20:08:31																							X	X		
1204870194	1	20:10:17																							X	X		
1204870195	1	20:12:04																							X	X		
ZZZZZZ	1	20:13:51																										
1204870196	5	20:15:37																							X	X		
550420014	1	20:17:24																							X	X		
550420015	1	20:19:10																							X	X		
CCV05	1	20:20:58																							X	X		
CCB05	1	20:22:45																							X	X		
550420016	1	20:24:32																							X	X		
550420017	1	20:26:19																							X	X		
550420018	1	20:28:06																							X	X		
550420019	1	20:29:52																							X	X		
550420020	1	20:31:39																							X	X		
550420021	1	20:33:26																							X	X		
550420022	1	20:35:12																							X	X		
550420023	1	20:36:59																							X	X		
550420024	1	20:38:45																							X	X		
CCV06	1	20:40:33																							X	X		
CCB06	1	20:42:20																							X	X		

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL

Client Sdg: 550420

Inst Name: ICPMS15

Instrument Type: MS

Start Date: 31-JUL-21

End Date: 01-AUG-21

Data File: 210731-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	21:50:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S10	1	21:53:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
S100	1	21:57:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICV01	1	22:00:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICB01	1	22:04:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CRDL01	1	22:08:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSA01	1	22:11:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ICSAB01	1	22:15:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV01	1	22:18:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB01	1	22:22:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
LR01	1	22:26:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV02	1	22:29:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB02	1	22:33:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	22:37:01																										
ZZZZZZ	1	22:40:38																										
ZZZZZZ	1	22:44:15																										
ZZZZZZ	1	22:47:51																										
ZZZZZZ	1	22:51:28																										
ZZZZZZ	1	22:55:05																										
ZZZZZZ	5	22:58:42																										
ZZZZZZ	1	23:02:19																										
CCV03	1	23:05:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB03	1	23:09:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204870187	1	23:13:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204870188	1	23:16:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420001	1	23:20:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204870189	1	23:24:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204870190	1	23:27:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	23:31:14																										
1204870191	5	23:34:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420002	1	23:38:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420003	1	23:42:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV04	1	23:45:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB04	1	23:49:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420004	1	23:52:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420005	1	23:56:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420006	1	00:00:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420007	1	00:03:47	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X
550420008	1	00:07:24	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X
550420009	1	00:11:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X
550420010	1	00:14:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 550420

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 31-JUL-21 **End Date:** 01-AUG-21 **Data File:** 210731-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
550420011	1	00:18:14	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420012	1	00:21:51	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCV05	1	00:25:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB05	1	00:29:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204870192	1	00:32:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204870193	1	00:36:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420013	1	00:39:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204870194	1	00:43:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
1204870195	1	00:47:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
ZZZZZZ	1	00:50:49																										
1204870196	5	00:54:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420014	1	00:58:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420015	1	01:01:39	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
CCV06	1	01:05:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB06	1	01:08:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
550420016	1	01:12:31	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
550420017	1	01:16:07	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
550420018	1	01:19:43	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
550420019	1	01:23:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X
550420020	1	01:26:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X
550420021	1	01:30:31	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
550420022	1	01:34:08	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
550420023	1	01:37:44	X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X		X	X			X	X
550420024	1	01:41:20	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X		X	X			X	X
CCV07	1	01:44:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
CCB07	1	01:48:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Metals
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Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 550420

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 31-JUL-21 **End Date:** 01-AUG-21 **Data File:** 210731-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
S0.0	1	04:01:59							X						X	X						X						
S10	1	04:05:37							X						X	X						X						
S100	1	04:09:14							X						X	X						X						
ICV01	1	04:12:52							X						X	X						X						
ICB01	1	04:16:30							X						X	X						X						
CRDL01	1	04:20:08							X						X	X						X						
ICSA01	1	04:23:44							X						X	X						X						
ICSAB01	1	04:27:21							X						X	X						X						
CCV01	1	04:30:58							X						X	X						X						
CCB01	1	04:34:35							X						X	X						X						
LR01	1	04:38:13							X						X	X						X						
CCV02	1	04:41:51							X						X	X						X						
CCB02	1	04:45:27							X						X	X						X						
ZZZZZZ	1	04:49:04																										
ZZZZZZ	1	04:52:41																										
ZZZZZZ	1	04:56:17																										
ZZZZZZ	1	04:59:52																										
ZZZZZZ	1	05:03:28																										
ZZZZZZ	1	05:07:04																										
ZZZZZZ	5	05:10:40																										
ZZZZZZ	1	05:14:16																										
ZZZZZZ	1	05:17:51																										
CCV03	1	05:21:28							X						X	X						X						
CCB03	1	05:25:04							X						X	X						X						
ZZZZZZ	1	05:28:41																										
ZZZZZZ	1	05:32:17																										
ZZZZZZ	1	05:35:53																										
ZZZZZZ	1	05:39:29																										
550420015	10	05:51:39							X							X						X						
550420016	10	05:55:15														X												
CCV04	1	05:58:53							X						X	X						X						
CCB04	1	06:02:31							X						X	X						X						
550420017	10	06:06:07							X							X						X						
550420018	10	06:09:44							X							X						X						
550420019	10	06:13:21																				X						
550420020	10	06:16:58																				X						
550420021	10	06:20:35							X							X						X						
550420022	10	06:24:11							X							X						X						
550420023	10	06:27:48							X						X	X						X						
550420024	10	06:31:24							X							X						X						
CCV05	1	06:35:02							X						X	X						X						

Metals
-14-
Analysis Run Log

Contract: DMAX00801

Lab Code : GEL **Client Sdg:** 550420

Inst Name: ICPMS15 **Instrument Type:** MS

Start Date: 31-JUL-21 **End Date:** 01-AUG-21 **Data File:** 210731-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Tl	Th	U5	U8	V	Zn
CCB05	1	06:38:39							X						X	X						X						
550420007	10	06:43:20							X													X						
550420008	10	06:46:57							X													X						
550420009	10	06:50:34																				X						
550420010	10	06:54:10																				X						
550420011	10	06:57:46							X																			
550420012	10	07:01:21							X																			
CCV06	1	07:04:59							X						X	X						X						
CCB06	1	07:08:37							X						X	X						X						

Note: Uranium-233 abbreviated U3 Uranium-234 abbreviated U4 Uranium-235 abbreviated U5
Uranium-236 abbreviated U6 Uranium-238 abbreviated U8

Standards

METALS
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Instrument Detection Limits

SDG NO. 550420

Contract: DMAX00801 **Lab Code:** **GEL** **MDL** **Effective Date:** 16−APR−17

Instrument(s): ICPMS15 **Verified on:** 17−JUN−2021

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		19.3	50.0
	Antimony		1.0	3.0
	Arsenic		2.0	5.0
	Barium		0.67	4.0
	Beryllium		0.2	0.5
	Cadmium		0.3	1.0
	Calcium		80.0	200
	Chromium		3.0	10.0
	Cobalt		0.3	1.0
	Copper		0.3	2.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Molybdenum		0.2	1.0
	Nickel		0.6	2.0
	Potassium		80.0	300
	Selenium		2.0	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.6	2.0
	Thorium		0.7	2.0
	Total Uranium		0.05	0.2
	Uranium−235		0.01	0.07
	Uranium−238		0.067	0.2
	Vanadium		3.3	20.0
	Zinc		3.3	20.0

SW846

METALS
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Linear Ranges

SDG NO. 550420

Contract: DMAX00801 **Lab Code: GEL**

Instrument ID ICPMS15

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Molybdenum	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Thorium	1000	2500	ug/L	01−AUG−17
Uranium−235	1000	.73	ug/L	01−AUG−17
Uranium−238	1000	99.27	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2153914**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204870188	ICP-MS spiking soluiton A	UI210526-A	.25	mL
LCS	1204870188	ICP-MS spiking solution B	UI210526-B	.25	mL
MS	1204870189	ICP-MS spiking soluiton A	UI210526-A	.25	mL
MS	1204870189	ICP-MS spiking solution B	UI210526-B	.25	mL
MSD	1204870190	ICP-MS spiking soluiton A	UI210526-A	.25	mL
MSD	1204870190	ICP-MS spiking solution B	UI210526-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204870187 MB	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
1204870188 LCS	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420001	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
1204870191 SDILT (550420001)	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
1204870189 MS (550420001)	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
1204870190 MSD (550420001)	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420002	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420003	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420004	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420005	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420006	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420007	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420008	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420009	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420010	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420011	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420012	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
210715	Concentrated Nitric Acid	1 mL
3318473	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 93 C
Temperature within limits (Y/N)?: y
Thermometer ID: 1120212072
Hot Block ID: 11
Digestion tube lot #: 2104009

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: **2153916**
Analyst: Stephen Michaels
Method: SW846 3005A
Lab SOP: GL-MA-E-006 REV# 14
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204870193	ICP-MS spiking soluiton A	UI210526-A	.25	mL
LCS	1204870193	ICP-MS spiking solution B	UI210526-B	.25	mL
MS	1204870194	ICP-MS spiking soluiton A	UI210526-A	.25	mL
MS	1204870194	ICP-MS spiking solution B	UI210526-B	.25	mL
MSD	1204870195	ICP-MS spiking soluiton A	UI210526-A	.25	mL
MSD	1204870195	ICP-MS spiking solution B	UI210526-B	.25	mL

Sample ID	Prep Date	Matrix	Initial Volume (mL)	Hot Block Stop Date (date)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1204870192 MB	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
1204870193 LCS	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420013	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
1204870196 SDILT (550420013)	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
1204870194 MS (550420013)	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
1204870195 MSD (550420013)	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420014	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420015	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420016	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420017	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420018	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420019	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420020	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420021	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420022	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420023	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2
550420024	29-JUL-2021 09:00:42	Water	50	07/29/21 15:00	50	1	<2

Reagent/Solvent Lot ID	Description	Amount
210715	Concentrated Nitric Acid	1 mL
3318473	HYDROCHLORIC ACID	2.5 mL

Comments:
Block Temperature (90-95C): 93 C
Temperature within limits (Y/N)?: y
Thermometer ID: 1120212072
Hot Block ID: 11
Digestion tube lot #: 2104009